Clinical Lecture
ON
BIRTH PALSIES.

Delivered at University College Hospital, June 15th, 1886,

BY W. R. GOWERS, M.D., F.R.S.

GENTLEMEN,—The condition of the boy before you can hardly fail at once to attract your attention. He cannot stand or walk; if he tries to do so, his legs, as you see, become stiff, and they cross one over the other. He can use his hands, but does so awkwardly, for their movements are unsteady. He is but eight years old, and you may naturally ask, What is the cause of a disability so great in one so young? To that inquiry I will try presently to give you an answer. The attempt will take us into a somewhat unexpected field. If we ask how long the child has been in this condition, we shall be told that the state has existed ever since birth; that as soon as the child's movements were observed they were seen to be peculiar, and that the peculiarity increased as the child passed on through the period of infancy, and the disorder became more obtrusive when the aimless movements of infancy should have assumed an ordered character as development progressed. It is often believed by parents that morbid states date from birth merely because a definite onset after birth was not noticed. In this case, however, as we shall presently see, there is reason to believe that the inference of the parents is correct, and that the malady does actually come into the class of diseases that are termed "congenital."

There was a time when the statement that a disease is "congenital" was held to be a sufficient explanation of its nature. It is not so now, but the word still conceals a considerable amount of ignorance, or at least an imperfection in our knowledge, of the diseases that are included under it. By its etymology the word seems to indicate such maladies as have their origin in the elements of the embryo, diseases "begotten with" their subject; but it is never thus restricted in actual use. It is often applied to all affections that are present at the time of birth, either actually present, or potentially present by their causes. "Congenital hydrocephalus" and "congenital wry-neck," for instance, are thus present at the time of birth. "Congenital" syphilis may only manifest its existence some time after birth, and the malady that recently occupied our attention—pseudo-hypertrophic paralysis,—although a congenital disease in the strict sense of the word, is seldom recognisable until later childhood. Many of the affections thus designated are acquired during fœtal life. Their causes do not exist in the embryo, but are to be found in some of the conditions of intra-uterine existence. Congenital wry-neck, for instance—the shortening of the sterno-mastoid muscle—is probably always due to the posture of the head within the womb. Thus, we have two classes of diseases commonly called congenital—germ diseases and diseases acquired during intra-uterine life. There is yet a third class. Children are sometimes born with morbid states that did not exist at the commencement of the short but perilous journey by which they enter the world. These morbid states are the results of injuries received during the process of birth. The forms of palsy that result from such injury constitute our subject to-day. "Obstetrical paralyses" they have been sometimes termed, but "obstetrical" is that which relates to "obstetrics," and "obstetrics," as you know, is a science and an art, and it is hardly fair to associate these diseases too closely with it. We will therefore term them simply "birth palsies."

The injury to the nervous system during parturition may be to peripheral nerves or it may be to the brain. Thus there are two classes of birth palsies, the "peripheral" and the "cerebral." One case is, indeed, on record of a third variety, a spinal birth palsy; but the nature of the case is such that we may reasonably hope it will be long without a fellow. In a case of foot presentation a French midwife employed traction on the legs with so much energy as to tear across the spinal cord, and the limbs of the child were necessarily paralysed during the few hours it lived.

I have not an example of the peripheral form to show you to-day, but many of you will remember a well-marked instance of it that came among my out-patients a few weeks ago, and illustrated the most frequent variety—paralysis of the upper arm. The nerves that suffer injury are chiefly in two situations—the facial nerve and the nerves of the arm. The two varieties differ in their mechanism: the facial nerve is injured only by the forceps; the nerves of the arm commonly suffer in other ways. The former is usually a trifling affection, although it is obtrusive in character. All parts of one side of the face are motionless, for the nerve is compressed just after it has emerged from its bony canal; but the injury is seldom severe. The loss of power passes away in the course of a few days or weeks. Very rarely, however, lasting palsy has been thus produced.

The nerves of the arm may be damaged in several ways. The injury may be associated with fracture of the humerus, and is then due either to the displacement of the broken ends of the bone or to the force that caused the fracture. In such cases the distribution of the palsy is irregular, and varies in each instance. In other cases, however, the injury is higher up, to the roots of the nerves as they enter the brachial plexus. This injury is commonly produced by pressure at one spot, in front of the edge of the trapezius. In a few instances the extremity of a much-curved blade of the forceps has pressed deeply here and has effected the injury, leaving at the same time a mark upon the skin which indicated the agency. In other and more frequent cases the injury is produced during the extraction of the child in a breech or foot presentation by the point of a traction-hook, or the tip of the bent finger, placed above the shoulder for this purpose. Such a mechanism was probably effective in the case you saw here. You may remember that I at once asked the mother how the child was born, and she replied that "the feet came first." The child's arm hung by its side, and could not be raised. The loss of power at the shoulder was the more striking because the hand and fingers were freely moved. When we examined the limb more closely, we found that the deltoid, the biceps, and the supinator longus were paralysed, and that they presented the electrical reaction characteristic of nerve degeneration. These muscles, often with the infra- and supra-spinatus, always suffer when there is a lesion in the place I have mentioned. The effect seems to depend on damage to the branch to the brachial plexus from the sixth cervical nerves, and the associated palsy has been called the "upper-arm type" by Erb, who first pointed out its peculiar character and its relation to a lesion at that particular spot. In these cases the immobility of the arm soon attracts attention, but there is not often any visible wasting. In young children the muscular substance bears but little proportion to the fatty tissue of the limbs, and slight muscular wasting scarcely affects their contour. If the palsy persists for a few months, its influence becomes more apparent. Happily such persistence is rare; the injury to the nerves is seldom severe, and power over the muscles is commonly regained in the course of a few weeks without any special treatment.

The third kind of birth palsy—that which depends on an injury to the brain—and of which this boy presents an instance, is of much greater practical importance than the others. It is not only more common, but its symptoms are wide in extent, often severe in degree, and, moreover, they are permanent instead of transient. As I said just now, if you follow back the history of these cases, you find that there has been no definite onset of the symptoms at any period after birth. If you extend your inquiry back to the time of birth, you find circumstances that raise a strong presumption that an injury during birth has been their cause; as we shall see, there is other evidence which converts this presumption into a conclusion of the very high probability that we are accustomed to call a "practical certainty." In most cases there is a history of difficult parturition, sometimes of a labour that was only ended by the forceps; in many instances the head of the child presented unmistakable external signs of the compression it had endured. In some cases, again, direct evidence of a morbid state of the brain was afforded by the occurrence of convulsions during the first few days of life, convulsions that were general or local, and in the latter case may have been accompanied by distinct loss of

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power. Moreover, the majority of these cases are in first-born children, and it is notorious that first labours are more prolonged and involve more danger to the child than others. When the labour was not the first, it is generally known to have been either one of exceptional difficulty and duration, or else an "unnatural labour"—that is, a labour in which the head of the child was born last. Of twenty-six well-marked cases of this affection, of which I have notes, the child was the first born in no less than sixteen, or at least three times as many as would have been without some causal relation to the fact. Of the remaining ten, the head was born last in no less than six. Thus, either the labour was the first or was "unnatural" in no less than twenty-two out of twenty-six cases. Of the remaining four, in three it was known to have presented special difficulty—in two, for instance, preceding children had died during birth in consequence of the difficulty. Thus the conditions of labour, and the facts, positive and negative, of the child's birth, alike suggest that the symptoms we are about to consider are the result of brain injury during birth. The probable nature of these cases was suggested long ago by Dr. Little in his work on "Deformities," and the significance of the conditions of birth was subsequently urged by him in an admirable paper read before the Obstetrical Society.

But we have other evidence of the nature of these cases, evidence of two classes, which, combined, constitute very strong indications. Children who are born under the conditions I have mentioned, and who present the evidence of cerebral disturbance soon after birth, sometimes die. In these a brain lesion has been found capable of producing the permanent symptom. Secondly, in those who present these symptoms and die in later life, a condition of brain has been found such as would result from the lesion found in those who have died soon after birth. For the most important of these facts we are indebted to an American physician, Dr. Sarah McNutt, whose investigations constitute, I think, by far the most valuable contribution to medical science that the profession has yet received from its members of her sex. The condition of the brain that is found in later life in these cases is an atrophy of the convolutions in the central region, in which the "motor centres" are situated. There is a depression of the cortex in this region, affecting often the same parts in the two hemispheres; it is generally greatest near the middle line, and becomes less towards the lower and outer part of the convexity. In this depression the convolutions are small and indurated, often less than half the normal size. In children who have died soon after a difficult birth, and who suffered from convulsions during the few days they lived, there is found an extravasation of blood on the surface of the brain—meningeal hemorrhage. The layer of blood is usually thickest over the region in which the depression is found in the later cases; and although it may extend over a wide region of the brain, it is the central region that is most compressed. Sometimes the cortical tissue is actually lacerated in this part. No doubt, in time the blood becomes absorbed, but the time required is so long that the compressed convolutions undego tissue changes and remain in the atrophied condition in which they are found in later life. The blood, however, is not always extravasated over the convexity of the brain. In some cases it is found at the base, beneath the tentorium, around the pons and medulla and cerebellum; the cerebellum is, indeed, then usually lacerated, and the blood comes apparently from the cerebellar vessels. Dr. McNutt found that when the presentation was natural the extravasation was chiefly at the base, and that when the head was born last the blood was chiefly over the convexity, but her cases are too few to permit us to say whether this is a general rule. From clinical facts, it seems probable that the hæmorrhage is often over the convexity in head presentations, as well as in unnatural labours; at least, the persistent symptoms, in most cases in which the head presented, are most readily explicable on the assumption of cortical damage. We cannot yet trace any difference in the effects corresponding to the two classes of labour. We do not know, therefore, what persistent symptoms are to be ascribed to the damage to the base and to the cerebellum. I have, however, seen a few instances in which hydrocephalus slowly developed after a difficult birth, and it seemed probable that extravasation about the medulla may have led to the occlusion of the foramina by which the fluid escapes from the ventricles.

Such, then, gentlemen, in general outline, is the nature of the cases of cerebral birth palsy. It remains for us to examine in greater detail the symptoms they present. Of most of these symptoms the case before you furnishes a characteristic example.

A child is born with difficulty, or else the head is born last, and has to endure not merely the compression inevitable to the process, but also a considerable degree of mechanical and asphyxial congestion. Often there is a conspicuous "blood tumour" of the scalp; sometimes there is an indentation of the skull, or other sign of injury. Often the child is apparently dead, and may only give signs of life after efforts to revive it have been continued for some time. There may be general convulsions or general rigidity for some days after birth, but these occur only in a minority of the cases that recover, because most children do not live who have endured sufficient injury to give rise to these symptoms. In some children distinct immobility of the limbs is noted during the early weeks of life; sometimes the limbs of one side are motionless, and those of the other side are moved; occasionally a special stiffness of the legs attracts attention almost from the first. In slighter instances, however, no special defect may be noted during early infancy, and it is only when the child should begin to walk and talk that the absence of these signs of normal progress arouses a suspicion that something is wrong, and leads to a closer examination of the limbs. At this age, in mild cases, the legs are found to be frequently rigid from spasm; sometimes they are flexed, sometimes extended, and often they are strongly adducted. There is usually spasm also in the arms, but it is of a different type, and causes incoördination and spontaneous movements, which are generally slow, like the athetoid movements that so often succeed acquired hemiplegia in children, but are sometimes quick and very like the movements of chorea. Voluntary actions are interfered with by the spasm, and coördination is conspicuously deranged. If the child tries to grasp an object, the fingers spread out irregularly, and only after some time close upon it in a spasmodic manner, and the grasp often cannot be relaxed when desired. Sometimes there is spasmodic flexion or extension of the elbow, and frequently the arm is at times strongly adducted.

Another symptom is not uncommon during infancy—a conspicuous difficulty in supporting the head, which tends to fall forwards or backwards or to one side. Rarely there is at first some retraction of the head. In many cases the muscles of the trunk are weakened, especially the muscles of the back. It is long before the child is able to sit up, and some slight curvature of the spine may develop in consequence of the inequality of the support afforded by the muscles and the habitual posture in consequence assumed. There is not often any abnormal condition of the face, but occasionally there is a difficulty in swallowing and even in articulation. Strabismus, external or internal, is present in many cases, the latter being the more frequent. It does not depend on any definite palsy. Mental defect exists in more than half the cases; sometimes it is so considerable as to amount to actual idiocy, and a child of seven or eight may be unable to speak, and be unclean in habit. A slighter defect of intelligence is more common—enough to render the acquisition of speech later than usual, and often to impress on the articulation some peculiarity which is erroneously ascribed to a local defect. It is often difficult to say whether defect of speech is due to insufficient motor innervation or to the mental state.

In the majority of cases the symptoms are thus bilateral and general in their distribution, although some parts may be more affected than others. But the disorder is not rarely limited. The limbs of one side may be affected in the characteristic manner, while those of the other side appear normal. The leg is then seldom severely affected, and the chief derangement is of the movement of the arm. Much more common than limitation to one side is the comparative escape of the arms. The legs present a condition of spastic paraplegia quite similar in its features to that which results from a primary disease of the spinal cord, except that there is a greater amount of adductor spasm, and consequently a tendency to cross-legged progression, which is seldom seen in purely spinal affections. In many of these cases, however, a slight disorder of movement in the hands may be found if it is carefully looked for, or, if the case is seen after the first years of life, a history of previous awkwardness may be ascertained.

Recurring convulsions are a prominent symptom of some

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cases of birth palsy, but are not so common as we might expect from the frequency with which such fits follow the hemiplegia that comes on in late infancy and childhood. In some instances convulsions occur during the middle or second half of the first year of life. They may cease after lasting a few months, or may continue and become established as a form of epilepsy. The fits in later infancy may be general, but those that persist are almost always one-sided; they occur in cases in which the limbs are unequally affected, and the convulsion involves the side in which the movement is most disordered. I have seen one case in which such left-sided fits were preceded by a visual aura.

The anatomical lesions enable us to understand the mechanism of the chief symptoms. There is damage to the cortex of the brain, which is compressed by the effused blood, and sometimes is actually lacerated. The clot is usually thickest over the motor regions, and especially near and within the longitudinal fissure. You know that the leg centre occupies the margin of the fissure, and the para-central lobule on the medial aspect. The symmetrical hæmorrhage is often so placed as to damage especially this centre. Hence we can understand the preponderant affection of the legs, and the reason why it resembles so closely that produced by disease of the spinal cord. The chief difference in the state of the leg in paraplegia from its state in hemiplegia is the much greater spasm in the former. The leg is related to both hemispheres of the brain, and its innervation from the hemisphere of the same side ensures some recovery of power and moderates the spasm. But if both leg centres are affected, compensation cannot occur; there is doubtless bilateral degeneration of both pyramidal tracts (or rather, perhaps, an arrest of their development), and a pathological state is produced very similar to that which results from primary disease of these tracts in the spinal cord. But it is not probable that the motor centres of the cortex are ever altogether destroyed; they still contain some nerve cells, often they contain many, although these cells may be changed in their finer structure and altered in their functional action. The arm centres, lying further from the middle line, are often less compressed, and probably contain still more active nerve cells, the abnormal state of which may be the cause of the irregular spasm and the spontaneous movements that are seen in the hands and arms. At the same time we must remember that a more complex mechanism may be at work—in the action of lower cerebral centres, deranged by the loss of the influence of those in the cortex.

The cause of the difficulty in swallowing that is observed in rare cases, and of the weakness of the neck, is uncertain. The muscles of the trunk are supposed to be represented in the cortex in its medial aspect, and it is highly probable that their weakness is due to the damage to this part. But the weakness of the neck, and the bulbar symptoms, may be explained either by symmetrical lesions of the corresponding cortical centres in the two hemispheres, or by the hæmorrhage around the medulla oblongata. The latter seems the simpler explanation, and is supported by the fact that retraction of the head has occasionally been noted soon after birth—a common symptom of irritation in this region. At the same time these symptoms are generally associated with the condition of the limbs that has been described, and which seem to point to a cortical lesion. It is, indeed, just conceivable that the same condition of the limbs may be caused by damage to the anterior pyramids of the medulla, but of this we have no practical knowledge. Thus we have still much to learn regarding the relation of the symptoms to the injury, especially to the basal hæmorrhage, and, I may add, to the frequent cerebellar lesion.

The symptoms I have described are those that result from considerable damage to the brain. But we may reasonably suspect that for one case in which such severe effects result from serious injury there are many cases in which a slighter lesion has more trifling consequences. It has been long believed that many cases of pure mental defect are due to this cause. We sometimes meet with children who suffer from epilepsy, whose birth was difficult, and in whom we can trace no cause of convulsions, either in hereditary disposition or in the incidents of their life, to which the malady can be ascribed. It is possible that in some of these the convulsive tendency may be due to slight injury to the cortex.

(To be concluded.)

ON CYCLIC ALBUMINURIA.

BY F. W. PAVY, M.D., F.R.S.

SERVICE was, I consider, rendered by the clear manner in which our present knowledge regarding the clinical significance of albuminuria was placed before the profession in a leader that appeared in THE LANCET a few weeks back. Conceded, as by the weight of authority is now permitted to be done, that cases of albuminuria may be encountered without having at their foundation anything of a grave nature, it becomes for many reasons a matter of great importance to be able to distinguish such cases from those associated with structural disease, the ordinary course of which is to lead on to the destruction of life. Looking at these opposite positions in which the phenomenon of albumen in the urine stands, a responsibility of no light nature is thrown upon the medical practitioner in deciding upon the manner in which it is to be viewed. Fortunately in the serious cases there are usually such clearly marked and easily recognisable accompanying phenomena existing as to point in an unequivocal manner to the conclusion to be formed. The microscopic examination of the urine, the history of the case, and the investigation of the general state may reveal that which at once shows the meaning to be attached to the presence of albumen in the urine that may fall under observation. Take, on the other hand, the case, say, of a young man who through life has enjoyed as good a state of health as the generality of persons. He has never, perhaps, had scarlet fever, nor has he been the subject of any other affection likely to give rise to renal disease. There is nothing to be perceived in his general condition to excite a suspicion of the existence of anything wrong. His urine happens to have been tested in the course of medical examination for life assurance or some such purpose, or it may be from some mere chance circumstance, and through this the discovery is made that albumen is present. The phenomenon that has been recognised stands alone as far as symptoms and physical signs go. Beyond this one factor there is nothing but negative evidence presented. Oxalate of lime is not unlikely to be visible under microscopic examination of the urine, but not at any time blood-corpuscles or casts of tubules. Such is the outline of a case that is not unfrequently come across. Nothing exists to show that it is connected with renal disease, and in any particular case that may fall under observation, if established to belong to the class I am referring to, experience does not give grounds to justify a grave issue being apprehended. But here lies an important matter. A diagnosis has to be made, and it is only after the fullest and most careful consideration that a decision should be arrived at. The subject is as yet comparatively new, and the field is open for our position to be improved by additional knowledge. Working, however, with the knowledge we possess, advantage is derived from its being shaped into as definite a form as possible, and it is with especial reference to this point that I have been prompted to forward the present communication.

Mental states, exercise, immersion of the body in cold water, and the ingestion of food have been named as agencies capable of determining the presence of albumen in the urine. In a considerable number of instances, also, amongst persons who from general causes apply for advice, a trace of albumen is discoverable without our being able to associate it with renal disease or to say why it is present. Dr. Grainger Stewart, it is known, made an extensive investigation of the urine derived from different groups of presumably healthy people, and found in nearly one-third of the number that evidence of the presence of albumen was obtained. I am often impressed at the frequency with which I have to record the presence of a trace of albumen, and in many instances there runs on for years the same kind of entry in this respect in my case-book, whilst in other patients' cases there may be the trace of albumen to note at one time and not at another. I could cite also cases where a considerable quantity of albumen has been for a lengthened period *continuously* discoverable without the development of the other accompaniments of Bright's disease. We may be told that established Bright's disease awaits these patients, but light from further observation is needed upon the subject.

In what I described at the Cardiff meeting of the British

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Medical Association in 1885 as "cyclic albuminuria" we have a condition which stands, with sharply defined characters, upon its own ground distinctly apart from that belonging to other forms of albuminuria. The cases described have since been recognised in this and other countries as constituting a group which is not unfrequently encountered. The distinguishing character of this group is that, without the evidence of the existence or pre-existence of renal disease, albumen under the ordinary course of daily life is present at one period of the day and absent at another, and that this recurs day after day in exactly the same order. At the period of rising in the morning there is no albumen to be discovered. In an hour or two's time albumen shows itself, increases in quantity for a while, and then as the day advances declines and becomes usually entirely lost before the end of the day is reached. After remaining absent during the night, it returns in the same manner as previously observed after rising the next day, and subsequently follows the same order. Such a course of events may be strictly spoken of as cyclic in nature. Dr. George Johnson, in an article that appeared in THE LANCET a short time back, objected to the application of the term "cyclic" in the manner that it has been employed, "for the reason," he said, "that it seems to imply that the abnormal condition occurs (like a tertian ague, for instance) in a regular cycle, without reference to external ascertainable and avoidable influences." The dictionaries, however, mention nothing about the conception that is here expressed, but simply define the word as signifying a succession of events recurring within a certain period of time, regularly and continuously in the same order. No allusion is made to the nature of the cause, as to whether internal or external, determining the order of events that occurs. It happens in this particular instance that observation shows that the altered position of the body which is naturally assumed in our daily round of life stands at the foundation of the orderly alteration of the state of the urine that takes place. It is natural for us to pass a certain portion of the twenty-four hours in sleep, and habitual for us to lie down in doing so. It is also natural for us, as active moving beings, to pass the other period of the twenty-four hours in the upright posture. Thus we have a daily round of alteration in the position of the body occurring, and this in certain persons happens to exert an influence which induces a periodical change in the state of the urine with respect to albumen. To say that we have a cyclic albuminuria only expresses a fact, without entering into the question of the cause in operation. The fact expressed is also susceptible of easy recognition, and further serves as a distinguishable feature of a class of case which for practical purposes it is important we should be able to recognise and view aright. Food in this class of case exerts no influence. If the person does not rise from bed in the customary manner in the morning, the urine gives no evidence of the presence of albumen, notwithstanding that a heavy breakfast may have been taken. From the cold bath likewise, and even the Turkish bath, inclusive of the cold douche, I have not been able to find that any sign of effects has been obtainable.

THE LANCET of Dec. 10th, 1887, p. 1157, contains notes from a paper presented as a thesis by Dr. Alex. W. Stirling on "Albuminuria in the apparently Healthy." Dr. Stirling confirms what I have stated about the order of events occurring in cyclic albuminuria. He refers to my first communication, which was read at the meeting of the British Medical Association in 1885, and mentions the suggestion which I then threw out upon the question of explanation. He does not seem, however, to have been aware of my further communication on the subject, which was published in THE LANCET in the following year (vol. i. 1886, p. 437), as he argues upon the same lines as is there done without making reference to it. He confirms what I have said about the upright position constituting the factor which determines the escape of albumen and gives the cyclic character to the case.

It has been stated that during the progress towards recovery from acute nephritis there is a stage in which, as in the cases to which the term cyclic albuminuria has been applied, rising from bed may occasion a reappearance of a certain amount of albumen in the urine, and that this may give rise to diagnostic difficulty and confusion. As regards the phenomenon referred to, we are all alive to the necessity of proceeding guardedly during the recovery stage of acute nephritis, and of watching the effect of getting up upon the urine. We are aware of its sometimes falling within our experience that a patient, after being allowed to get up, has to submit to returning to bed and remaining there a little longer on account of a reappearance of albumen—just, it may be said, as may happen during convalescence from acute rheumatism in consequence of a return of pain in the joints induced by like circumstances. In such cases, however, there is the previous history to deal with, and with this before us the appearance of albumen, determined by rising from bed, cannot be misread or give rise to any misconception. It is fairly presumable that no one would venture to form an opinion without taking into consideration all the information belonging to a case, and scrupulously looking, whether evident upon the surface or not, for anything in support of the existence of renal disease.

It must be held to be a matter of deep importance to a person whose urine happens to be found to be albuminous that a correct differentiation should be made of his case. It is equally as unfortunate that the subject of the simple form of cyclic albuminuria should be placed in the same position as the sufferer from actual renal disease, as that the subject of renal disease should be regarded and dealt with as one suffering only from a functional deviation from the normal state. My own experience agrees with what has been recorded as the experience of others with regard to treatment in the cyclic class of case. No line of medicinal treatment has been found to exert any visible effect upon the condition. It has also, on the other side, to be said that, although these cases have now been recognised and their progress watched a considerable number of years, experience has not shown that the disposition exists to pass out of their original form into the class associated with textural disease. Surely, with evidence of such a nature before us, the grounds of justification are not afforded for regarding these persons as requiring to be kept like patients under continued observation and treatment, and for believing that otherwise their condition will be likely to pass on into that of established renal disease. Without absolute need for it, to be consigned to the sick room and dealt with like one suffering from acute nephritis, standing in peril of becoming the subject of confirmed Bright's disease, is a serious infliction to be borne. Cases have occurred in which I have seen this course adopted, and I am anxious to urge that it behoves us, in the interests of those who look to us for guidance, to exercise a discriminating power and to shape our action accordingly.

The main object, in my opinion, to be aimed at in the class of case about which I have been writing is to maintain by hygienic measures and by medicinal treatment, if seen in any direction to be necessary, the general health in as satisfactory a state as possible. A quiet, even, and healthy mode of life, free from exposure to extreme conditions of any sort, will naturally suggest itself as the most prudent mode of life to recommend to be adopted. Harm to the physical state and future health may be occasioned by management conducted upon the lines of that pursued for active renal disease. There is the further consideration, which is not an unimportant one, that in the case of a boy or girl, through interference with the education, the future social position and prospects may be materially prejudiced. The great point to be attained is that the case should be rightly discriminated, and I would say if any doubt exists the opinion given should be guarded with a distinct expression of uncertainty as regards the future. I do not desire that too much importance should be attached to it, but there is a feature about the urine which may be alluded to as affording a certain amount of collateral aid in forming a diagnosis. Much further knowledge than we possess doubtless remains to be acquired regarding the chemistry and physiology of the different kinds of albuminous matter. Already the number of modifications of albumen enumerated is large, and certain varieties are encountered in the urine. The usual form met with in renal disease is serum-albumen, which is not precipitated by the organic acids. It is certainly the exception and not the rule in cases of structural renal disease to find that anything in the shape of proteid matter is thrown down by the organic acids. In cyclic albuminuria, on the other hand, my experience leads me to say that it is the rule instead of the exception for the addition of an organic acid to be attended with the production of a precipitate. What is usually observed in this class of case is that two kinds of albuminous matter are present—one which, like mucin and alkali-albumen, is precipitated by an organic acid, and the other which corresponds with serum-albumen. Using the ferrocyanic test, a certain amount of proteid

precipitate is thrown down by the citric acid, which is employed as a first step in the application of the test, and then a further precipitate falls on the addition of the ferrocyanide. Besides the other advantages which the ferrocyanic test possesses—these advantages being (1) that it will bear comparison with any other test for delicacy, (2) that it is not open to any fallacy, and therefore does not require a second test to be employed to check or corroborate it, (3) that it does not call for the use of a spirit lamp, and (4) that the agents are of a perfectly innocent nature in every way, and may be kept for use either in solution or in the form of pellet, which may be packed into a test-tube arrangement of about the size of a pencil case for carrying in the pocket,—besides these advantages, which are such that no other test can lay claim to, the ferrocyanic test affords suggestive information bearing upon the recognition of cyclic albuminuria.

THE CLASSIFICATION OF NEOPLASMS.

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AT a time like the present, when so many earnest seekers after truth are striving for better knowledge and understanding as to the nature of cancer and tumour formation, I propose to publish a short account of the results of my own labours in this direction.

In the course of organic evolution all parts are not equally developed, for while some are reduced and disappear others arise and become highly developed. In the majority of animals the most important morphological changes occur during embryonic life, as is the case with man, mammals, birds, and fishes. But in many amphibians, insects, &c., very remarkable changes of form occur long after completion of the fœtal development. Of this the metamorphosis of the herbivorous tadpole into the carnivorous frog is one of the most striking examples. In man and mammals such changes are more restricted, but instances occur in the development of the teeth, thymus, breast, uterus, skeleton, and the changes at puberty. In short, many facts, both in normal and morbid development, indicate the possibility of tissues remaining unchanged for long periods, and then taking on new phases of growth and development by a kind of revival of the embryonic activity. With such changes the various pathological new formations must be associated. In the ordinary course of events, the proliferation and development of the cells of the unfolding organism proceeds in a regular and orderly manner, in accordance with the specific hereditary tendency of the whole. But the process, once started, does not cease on account of irregularity, or because it is taking a wrong direction. Hence, cells may arise at a place where they have no business, or at a time when they ought not to be produced, or to an extent that is at variance with the normal formation of the body. In the embryo, monstrosities and malformations are thus produced, and at a later period of development the various pathological new formations. These extremes graduate so insensibly into one another that it is impossible to separate them by any natural line of demarcation. Ever since the establishment of the cell theory, it has been recognised that the one common process underlying the evolution of all organic structures is development from cells. We are indebted to the sagacious Johannes Müller for insisting on the correspondence between the development from the embryo and the pathological neoplastic process. Virchow has pointed out that the structural elements of all neoplasms are derived by proliferation from pre-existing cells of the part whence they originate; and he has further shown that these pathological processes have their physiological prototypes. But hitherto no one has clearly indicated the physiological prototypes of cancer and tumour formation. This is the task to which I now propose to address myself.

In investigating the local changes in neoplasms, it is impossible not to be struck by the fact that at every turn the phenomena met with have their counterparts in the normal evolution. This is especially true of the elementary histological processes. Pathological and physiological cells are alike in their morphological and vital properties. Cell and nuclear division conform entirely to the physiological type, even as to the details of karyokinesis. In both cases the tendency of the newly formed cells to revert to the parental type is perfectly obvious, and it is especially so when the cells become developed into tissues, whether normal or pathological. Hence it happens that throughout the whole range of pathological neoplasms no structures of new and specific type are to be found; but we meet everywhere with structures which resemble the physiological tissues, both genetically and histologically. In the ordinary course of development the process of cell multiplication goes on until the proper amount of structure for the needs of the organism has been produced; then it ceases within certain limits. During this process most of the original undifferentiated protoplasmic cells are metamorphosed into special structures, only a few remaining lowly organised and capable of further growth and development. In the healthy organism these cells subsequently concern themselves only in the maintenance and repair of the established structures. In this quiescent state they continue throughout the whole life of the individual, unless aroused by abnormal conditions. In all this there is evidence of definite law regulating the development of the tissues and organs in relation to each other and to the organism as a whole.

Though each of the constituent cells of the higher organisms is to a large extent dependent upon others, yet at the same time each manifests a certain independence or autonomy. If we wish to grasp the significance of the special changes underlying pathological new formations, we must never lose sight of this important factor—the *autonomy of the cells*. There are good reasons for believing that every component cell of the multicellular aggregates has the inherent power, under favourable conditions, of developing itself into the form of the parental organism; we may say, then, that each cell is potentially the whole organism. That the degree of development actually attained by each cell usually falls far short of this is due to the restraining and modifying influence exerted by the whole organism upon its protoplasm, which is thus compelled to perform comparatively subordinate modified functions. In proportion as the cells become thus specialised, they suffer more or less complete loss of their primitive reproductive power. But certain cells never attain a high degree of development; they remain in a lowly organised condition. As long as such cells are subject to the normal restraining influence of the organism, they develop in accordance with the specific hereditary tendency of the whole. But when this influence is weakened or withdrawn their potential reproductive powers may become actual. In the ordinary course of the life of the higher organisms the only cells thus set free are the reproductive cells. But *any* cells abnormally emancipated may then grow and multiply more or less independently, regardless of the requirements of the adjoining tissues, and of the organism as a whole. Collections of lowly organised cells thus arise, which, not being required for the building up of the parental structure, become superfluous, and are no longer retained directly under its controlling influence. In their development such cells soon assume an *individuality* of their own; there is manifest tendency to the formation of a new aggregate rather than to enlargement of the old one. This is the essential idea of a neoplasm, which *in ultimate analysis* may be regarded as the product of an abortive attempt of certain cells to reproduce a new individual by agamogenesis. There is, then, a certain amount of truth in the remarkable saying of Paracelsus, that "in such a disease a man is himself and another; he has two bodies at one time, enclosed the one in the other, and yet he is one man." In this way, then, the various pathological new formations originate by reversion of cells, which are usually engaged in maintaining the normal structure of the body, to an embryonic state of activity. The morbid products, though themselves redundant, generally represent a reduction or *minus* of the corresponding healthy structures whence they originate, differing from them only in degree. In all of these cases, as in the new formations of embryonic life, the subordination of the local processes to the specific hereditary tendency of the whole appears to be lost or diminished, so that unspecialised cells then manifest their potential reproductive qualities by taking on semi-independent growth and development. In short, there is departure from the definite order, limitations, regular stages, and fixed periods of the normal evolution.

Since the structures composing morbid growths form by a process analogous to that by which the normal tissues and organs evolve, the next step in our investigation must be to work out their evolution in association with that of the corresponding tissues and organs.

Every higher animal originates from a single cell—the cytula or fertilised germ—by continually repeated cell-multiplication. A solid spheroid of similar protoplasmic cells—the morula—is at first produced. Within the morula fluid collects, and the cells become spread out upon its surface in the form of a single limiting layer—the *blastoderm*. The cells of the blastoderm differentiate into two layers, one of which becomes more or less completely enclosed within the other. The outer layer is the *epiblast*, the primitive integument; the inner layer is the *hypoblast*, which forms the primitive digestive organ. Between these two layers a third, the *mesoblast*, usually appears. It probably originates from the primary layers by differentiation. All embryologists are now agreed that each blastodermic layer originates only a certain series of tissues. For the present purpose it will suffice to state that the *epiblast* gives rise to the epidermis and its derivatives—nails, hairs, and the various integumentary glands, including the mammary glands. The lining membranes of the mouth (stomodæum) and anus (proctodæum), with their glandular derivatives, are also of epiblastic origin. The dermis, however, is derived from the mesoblast. The line of junction between epiblast and mesoblast corresponds therefore, in the adult, with that between dermis and epidermis. The *hypoblast* is the source of the whole epithelial lining of the digestive canal with its derivatives, including that of the air-passages, lungs, bladder, liver, pancreas, and the glands of the alimentary tract. The primitive origin of the pleuro-peritoneal epithelium and of the genital cells is probably hypoblastic. The *mesoblast* gives origin to the connective tissue series of all parts of the body, including cartilage, bone, and bloodvessels. His distinguishes only two germinal layers—the *archiblast* and the *parablast*. The former he regards as originating from the cells of the ovum, the latter from the white yelk. As to the correctness of this theory I must leave embryologists to determine. However, I shall not hesitate on this account to avail myself of the classification of His, because, independently of theory, it is perfectly natural and very convenient. The *archiblast* originates all the products usually ascribed to the epiblast and hypoblast: in short, all the structures of the body, except the connective tissue series and the bloodvessels, which develop from the *parablast*.

In the whole course of its subsequent development a derivative of one germ layer never develops a structure originally derived from another. Hence after the differentiation of the blastodermic layers, no wholly embryonic cells are ever formed—that is to say, no cells are formed, like those of the morula, from which any structure might finally develop. Cells subsequently arising can only develop certain tissues—viz., those that are normally derived from the layer whence they originate. Hence derivatives of the archiblast always remain within this type, and never originate parablastic structures. In the development of pathological new formations the same law is observed. There are among neoplasms no transitions from one type of tissue to another. The law of the specific nature of the tissues is everywhere obeyed.

Since the origin and development of pathological new formations follows a course homologous to that of the tissues in which they originate, we may classify these growths, like the normal tissues in association with which they develop, according as they originate from cell derivatives of the one or the other of the germinal layers; that is to say, they are either of *archiblastic* or *parablastic* origin. Further, since all organic structures are primarily derived from cells by a process of differentiation, it follows that a really scientific classification should be founded on the *degree of development* attained by the cells in their upward progress to form tissues and organs. In accordance with this I divide each of the foregoing classes of neoplasms into two sub-classes, the *lowly* and the *highly organised*. This classification has the great advantage of indicating clearly the *genetic relationship* between the normal and the pathological processes.

All *archiblastic* neoplasms are built up after the type of epithelial tissue. They consist of newly formed epithelial cells of epiblastic or hypoblastic origin; and this is their essential characteristic. These cells are derived by excessive proliferation from the normal cells of the part whence they originate, and the tendency to reproduce the parental type is always manifest. Hyperplasia, and not inflammation, is the starting point of every pathological neoplasm. Inasmuch as many archiblastic neoplasms in the course of their development mimic glands of the body, they have been called organoid. Some parablastic elements are usually associated with archiblastic neoplasms, but these elements never form the essential part of the tumour. Most archiblastic neoplasms never attain a high degree of development; they exhibit, as it were, only the initial stage of the evolutionary process which they mimic. The result is a confused and indefinite mass of structure, consisting of proliferous epithelial cells in-growing into the adjacent tissues. Such are the *epitheliomata*, which is the term I use for all malignant epithelial neoplasms. As there are several varieties of normal epithelial tissue, so there are several corresponding varieties of epitheliomata, the differences depending upon the nature of the constituent cells, which may be either squamous, cylindrical, or glandular. What I call glandular epitheliomata are usually named carcinomata. In other instances the newly formed cells undergo well-marked developmental changes, the result being new formations *closely resembling* the homologous parental structures. Such are the *adenomata*, the neoplastic cysts, and the *papillomata*, which are all of them non-malignant.

The *parablastic* neoplasms may be treated in a similar way. All the members of this class are of mesoblastic origin, and they are modelled after the type of the embryonic or adult connective tissues, in association with which they originate. In many cases only a low grade of organisation is attained; the new formations consist of structures homologous with corresponding embryonic stages of development, or but little removed from them. Such are the *sarcomata* and *myxomata*, which resemble immature connective tissue and are more or less malignant. In other instances the evolution of the morbid structure is much more complete; then we get fibromata, lipomata, chrondromata, osteomata, &c., which differ but little from the normal parental fibrous, fatty, cartilaginous, and osseous tumours, and are non-malignant. My classification, then, may be briefly stated as follows:—

I. *Archiblastic* neoplasms.
- 1. Lowly organised—
  - *Epithelioma.*
    - Squamous.
    - Cylindrical.
    - Glandular.
- 2. Highly organised—
  - *Papilloma.*
  - *Adenoma.*
  - *Cystoma* (neoplastic).

II. *Parablastic* neoplasms.
- 1. Lowly organised—
  - *Sarcoma.*
    - Round-celled.
    - Spindle-celled.
    - Myeloid.
  - *Myxoma.*
- 2. Highly organised—
  - *Fibroma.*
  - *Lipoma.*
  - *Chondroma.*
  - *Osteoma.*

Just as there are intermediate gradations between the various orders, genera, species, &c., into which naturalists have arranged the animal world at large, so between the classes, sub-classes, &c., of pathological neoplasms, transitional forms exist. All such arrangements are, in fact, merely subjective conceptions, chiefly of use as indicating, amidst many varying degrees of modification, the common bond underlying them all—propinquity of descent.

As I have previously indicated, many neoplasms are malignant—that is to say, they have the power of reproducing themselves, either locally after removal, or in distant parts; while others have no such infective properties. Need we assume any specific difference between the two kinds of neoplasms to account for this? Certainly not. Between the malignant and the non-malignant growths so many transitional forms exist that it is impossible to sever the chain otherwise than by arbitrary methods, contrary to the nature of things. Upon what, then, does this difference depend? It must be borne in mind that before any neoplastic action can arise in a part, the normal restraining influence exerted by the whole organism upon its cells, in accordance with the specific hereditary tendency of the whole, must be weakened, modified, or withdrawn. Moreover, it has been found that the product of the evolution of cells thus abnormally emancipated varies according as the emancipation is complete or more or less incomplete. As I have previously mentioned, the natural tendency of cells thus completely

emancipated is to form new individuals by agamogenesis. But in the higher animals this never happens, because the emancipation is always more or less incomplete; hence in them only new parts, new tissues, and neoplasms are formed. Here the nature of the product seems to depend upon the grade of organisation attained by the neoplastic cells. It is well known that in the formation of highly organised structures the cells of the part suffer loss or impairment of their proliferous (reproductive) power, owing to their protoplasm being used up and converted into special tissues. Most non-malignant neoplasms are of this nature; their histological character closely resembles that of the corresponding normal tissue, whence they originate. Such neoplasms lack infective properties because they are highly organised. On the other hand, all lowly organised neoplasms are more or less malignant, and the most malignant are the most lowly organised. Hence it may be concluded that the degree of malignancy of a given neoplasm is chiefly dependent upon its grade of organisation. To this cause, and not to any essential difference in nature of the morbid process, I attribute the different behaviour of these two kinds of neoplasms.

Viewing the matter in this light, I can see no probability of there being any truth in the theory that neoplasms are the outcome of general *blood* disease, dependent upon the presence of micro-organisms like tubercle and syphilis. I think De Morgan came nearer the truth than anyone else when, in the memorable debate on cancer at the Pathological Society in 1874, he said, "I can see no analogy between new growth, whether as innocent as lipoma or as malignant as cancer, and the products of true general or blood disease in respect to their genesis and destination. From the first a tumour is a living, self-dependent formation, capable of continual growth by virtue of its own power of using the nutritive materials supplied to it. Nothing like this is seen in any of the blood diseases."

THE TREATMENT OF ACUTE RHEUMATISM, WITH SPECIAL REFERENCE TO THE USE OF THE SALICYLATES,[1]

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THIS paper is based upon 2200 cases of acute sthenic rheumatism occurring in both sexes under thirty-six years of age. Of these cases, 850 were taken from the clinical records of Guy's Hospital before the introduction of salicylates; the remaining cases were all treated with salicylates, the remedy being in almost every instance salicylate of soda; the dose uniform—twenty grains, every one, two, or more hours. Through the great courtesy of the staff of St. Bartholomew's Hospital, 515 of these cases have been drawn from the clinical reports of that hospital; the remaining cases, without exception, are from Guy's.

The introduction of the salicylates has completely revolutionised the treatment of acute rheumatism, and the time appears now ripe to inquire into the advantages of this specific treatment, and it appears right to ask if with these advantages there may not, at least in some cases, be corresponding disadvantages which a more complete and exact knowledge of the action of the drug may prevent or mitigate. An analysis of this large number of cases was conducted principally for the purpose of estimating the comparative results in the case of patients treated specifically, and on general principles, (1) with regard to the suffering due to the joint effusion, (2) the length of illness, (3) the percentage of cases affected with cardiac complications, (4) the mortality, and (5) the dangerous symptoms which many observers state follow the use of salicylates.

With regard to the pain due to joint effusion, there cannot be any doubt that patients treated with salicylates in many cases experience a marked and rapid diminution or total cessation of pain, and parallel with this loss of pain there is frequently an equally rapid fall of temperature. Tables were prepared showing that in the case of 728 patients treated with salicylates, 582 lost their pains within seven days. Making full allowance for the heavy list of relapses—namely, 137,—these figures dwarf those derived from patients treated on general principles, for here we find that, among 612, 140 only lost their pain in a similar period of time. Complete relief from pain within three days was noted in 300 patients treated at St. Bartholomew's out of a total of 515. Forty per cent. of these relapsed, the word "relapse" not being made use of unless there had been decided return of joint pain accompanied by a temperature above 100°, the condition lasting longer than twenty-four hours. In many cases it was noted that the illness following on a relapse was of more intense character, being marked with higher temperature than noted at the initial seizure, and, again, in most cases was complicated with cardiac mischief. Pain and stiffness of joints appeared more general after the fever had subsided, among patients treated specifically, than among those treated on general principles.

Although all observers do not exactly agree as to the relative frequency with which acute rheumatism is complicated with cardiac lesions, the various estimates closely coincide, and may be said to indicate from 50 to 60 per cent. of patients as likely to have cardiac complications. With this estimate the figures quoted will be found to agree. It has been impossible to differentiate between different forms of cardiac disease. Among 850 patients treated on general principles, 500 were noted as having cardiac mischief. Examining the salicylate cases in series as they were collected, of 328 cases from Guy's 190 were affected. In a second series from Guy's, of 360 cases 241 had cardiac complication; and, again, in 515 cases from St. Bartholomew's 316 were affected. A study of these figures purposely reported in series shows how extremely difficult it is to form an exact numerical estimate of the comparative frequency with which the heart is affected in acute rheumatism. Taking any one of these series by itself, a different conclusion would be arrived at from that obtained by considering the cases in aggregate. If the total number of cases be taken, we find that among the salicylate series slightly over 60 per cent. were affected, whereas in the case of patients treated without salicylate slightly under 60 per cent. were affected. Practically these percentages agree, and enforce the impression gained from studying a large number of cases that the salicylates have no effect whatever in either reducing, preventing, or limiting the intensity of cardiac inflammation occurring during the course of acute rheumatism.

From the records of St. Bartholomew's ninety-five cases were taken, showing the commencement of cardiac disease after the patient was admitted into hospital, where, on admission, the heart having been carefully examined, no trace of disease had been found, and where the patient at the time of the inflammatory attack was thoroughly under the influence of salicylates. Estimating the value of the specific remedy in cases of primary rheumatism, it was found that of 516 patients treated without salicylates 290 were affected with cardiac complication; of 736 cases of primary rheumatism treated with salicylates 402 had cardiac complication; the proportion between the two groups being almost identical.

Tables were constructed to show the effect of treatment as influenced by the length of illness before admission; i.e., before the patient was placed under treatment, specific or otherwise, 1089 cases were so tabulated, 507 being treated without salicylates and 582 with that drug. The study of these cases showed little or no difference between the two groups.

Attention was drawn to the dangerous symptoms observed following the use of the drug, and Dr. Broadbent's remarks, when president of the Clinical Society, were quoted, showing the necessity of making some such inquiry. The author stated, from his own study of the matter, dangerous symptoms occurred in many cases where the temperature had fallen to normal, and the pains had completely subsided. In these cases furious delirium ushered in hyperpyrexia, with fatal results. In order to make the inquiry more complete, advantage had been taken of all published cases in THE LANCET since the year 1864. In twelve years, 1864-75 there are 19 fatal cases mentioned; in 16 of these death was attributed to hyperpyrexia. These cases all occurred prior to the introduction of salicylates. In ten years and six months—1876 to June, 1886—24 fatal cases are reported as occurring among patients treated by salicylates; in 20 of these cases the fatal result was attributed to hyperpyrexia. These published cases were not referred to for the purpose of estimating the comparative mortality, but rather with the view of drawing attention to the fact—which has been

[1] Abstract of paper read before the Medical Society of London, Feb. 13th, 1888.

disputed—that patients under the influence of salicylates, having lost their pain and fever, may yet have a sudden rise of temperature amounting to hyperpyrexia, such condition being often accompanied with delirium of a furious character. The leading features of such cases were mentioned, brief details of 9 being given.

Anticipating the retort that in at least some of these cases the drug had not been used in sufficient quantity, several cases were quoted in which very large and oft-repeated doses had been used—i.e., one where fifty grains of salicin had been given every hour, and another where salicylate of soda had been given in twenty-grain doses every hour for two days, with relief of pain and fever, but where hyperpyrexia occurred while the patient was under these large doses. Again, a series of cases were alluded to, two falling under the direct notice of the author, in which the alarming symptoms ceased on the drug being withdrawn. Attention was also directed to toxic effects occurring in a few cases in which only very small quantities of the remedy had been used, in these cases having produced a grave state of cardiac depression. A careful investigation into these and kindred cases proves that in salicylates we have no safeguard against hyperpyrexia, and that when a patient treated with these remedies has a rising temperature the drug should be at once discontinued, and other methods adopted for controlling this dangerous complication.

A high temperature was shown not to be incompatible with the ordinary administration of salicylates, a higher temperature than that found in the initial attack being especially noticed in the frequent relapses observed when patient re treated with salicylates. In this respect the relapses under salicylates differ from those observed among patients treated on general principles. Among 850 patients treated without salicylates, a temperature of 103° was noted in 70, delirium being but seldom alluded to, furious delirium *never*. Of 505 patients treated at St. Bartholomew's with salicylates 146 had a temperature of 103° and upwards; 20 of these had delirium. Again, of 386 patients from Guy's, all treated with salicylates, 66 had a temperature of 103° and above, 57 being noted as suffering from delirium, and in many instances the delirium was specially mentioned as being of furious character.

Attention was particularly drawn to the fact that, clinically, acute rheumatism is but rarely complicated with even the mildest form of delirium, and the passage from Senator's article was read substantiating this statement. Again, it was urged that the usual clinical course of acute rheumatism was marked by a temperature highest at the initial outbreak, which fact has been emphasised by Wunderlich. And, inasmuch as patients treated with salicylates are peculiarly prone to delirium—a symptom hitherto looked upon as of the gravest omen,—caution was called for in the use of a remedy which in many cases evidently produced a delirious condition.

The author stated that a careful study of a large number of cases could not in any way support the view that in salicylates were to be found specifics against acute rheumatism. If in truth a specific, the drug should show an overwhelming antagonistic influence, not only to the pain accompanying acute rheumatism, but also to the complications with which its path is beset. Such complications, by reason of their frequency, have come to be looked on as factors in the disease. Factors they are not. Any cardiac, pulmonary or nervous complication affecting the initial attack being due directly to the *materies morbi* of the disease, any remedy specific against the *materies morbi* must necessarily be specific against the various effects of such poison, if given in time and in sufficient quantity. Endocarditis, pericarditis, and pleurisy are as much the result of the disease as the painful swollen joint, and as such should be directly influenced by the remedy. There is, however, abundant proof that such is not the case, these complications appearing while the patient is under large and oft-repeated doses of salicylates.

In a second part of the paper the various kinds or classes of acute rheumatism were discussed, and an attempt made to formulate rules for help in their treatment. Clinically, acute rheumatism has been found to fall into one of three great groups: First, that as seen in child-life, where the tendency to cardiac complication without concomitant joint pain is so frequently met with, in which group salicylates were not considered advisable, in many such cases doing harm by producing cardiac debility. Secondly, a group embracing the rheumatism of early adult life, characterised by all the well-known symptoms of rheumatic fever—a group which, for convenience of treatment, can be further subdivided into three minor divisions: (*a*) acute sthenic rheumatism; (*b*) subacute attacks, differing from the last not only in intensity, but often in having a prolonged invasion period; and (*c*) thirdly, the subjects of unstable nerve power, whether such a state of nervous system be the result of a congenital peculiarity or have been induced by alcoholism. Patients falling within each of these three divisions are benefited by a different treatment, the first only being very directly helped by salicylates. In the second, salicylates may be often used as an anodyne, and may be combined with a more general and tonic treatment, while with patients whose nervous system is easily disturbed, and in whom there is tendency to delirium, salicylates should be only given with extreme caution, and are often highly dangerous.

Acute rheumatic attacks of late adult life present many anomalous characters—anomalies sufficient to warrant these cases being placed in another group. Many of these border on gout. Here there is not the same tendency to cardiac complication. Salicylates may be given as an anodyne. The drug should not be pushed; and where it has been given for forty-eight hours without reducing the temperature, notwithstanding the fact that pain has completely subsided, it should be discontinued. The remedy seems to be contra-indicated in cases where relapse rapidly follows relapse. The propriety of continuing salicylates in cases where the attack has been complicated by one of the severer forms of cardiac or pulmonary inflammation was considered, the evidence being that in such cases it was advisable to discontinue their use.

ADDITIONAL SERIES OF ELEVEN CASES OF CHOLECYSTOTOMY.

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IN the columns of THE LANCET of August 29th, 1885, I published the last statement of a series of operations on the gall-bladder, and these amounted to thirty cases with one death. The result in this fatal case was not attributable to the operation, but to the progress of the disease, the operation itself having no influence either one way or the other on the result of the case. Of the other thirty cases all are still living, so far as I know, with the exception of one who has since died of phthisis. In none of them is there any indication of a recurrence of the disease. I am now in a position to add the annexed list of eleven cases, all of which have recovered but one, and in all of the ten recoveries complete relief from the symptoms has already been obtained. (See Table.) The fatal result in the exceptional instance was due to the advanced age and extremely anæmic and exhausted condition of the patient. She was sixty-one years of age, and had suffered for a very considerable time, and before the operation there was no doubt that the gall-bladder was in a condition of suppuration. She never completely rallied from the operation, and died on the third day. A post-mortem examination was made by Dr. Arthur Foxwell, who reported "the heart as being small, with much pericardial fat; spleen large, soft, and diffluent; advanced cirrhosis of kidneys. The head of the pancreas was the starting-point of a fibrous carcinomatous growth, which spread thence to the portal fissure, over which it was scattered in walnut-sized masses. A few pea-sized masses were scattered scantily throughout the liver. I found the drainage tube inserted in an incision one inch long in the base of the gall-bladder on its anterior surface. The gall-bladder was enlarged, empty, and its walls much thickened. About half an inch from the junction of the ducts, the carcinomatous infiltration in the walls of the cystic duct could be detected, but this duct, though constricted, was patent. Both the cystic and hepatic ducts were practically closed very near their junction with the cystic, but not absolutely so. There were one or two foci of suppuration around some bile ducts in the liver. The bile ducts in the liver were generally much dilated, and deeply stained; the whole organ was considerably enlarged, much congested, and in a state of biliary cirrhosis." At the time of the operation the gall-bladder contained a large

solitary gall-stone, and about four ounces of pus of an extremely offensive and fetid character, and I very much doubt if the operation had any effective influence in hastening the patient's death. I am quite inclined to put it in the same category as the other fatal cases of the previous list.

Of the other ten cases, the complications and difficulties of the operations were such as have already been described; that is to say, inflammatory adhesions, with contraction of the gall-bladder, often making the operations extremely difficult. I found in some of them the process of suppuration had not begun, and this was chiefly in cases of multiple gall-stone. In the solitary gall-stone the trouble seems always to tend towards suppurative change. This makes the gall-bladder very friable, contracted, and adherent to the deep structures, so that the operation is often very difficult. But it is perfectly clear that when there is an absence of cancerous complications, and the age of the patient is such as to give her a fair chance, the recovery from this operation is almost certain, and the amount of relief obtained from it most amply compensates for the small amount of risk.

The one question still under discussion for the surgical treatment of gall-stones is as to whether the gall-bladder should be removed or not; for I cannot think it is worth while discussing the fanciful operations of stitching the gall-bladder to pieces of intestine. Such operations would not be possible in cases where they would be most required—those of suppurative cholecystitis; in fact, in the majority of cases where I have operated in the presence of suppuration of the gall-bladder such operations would be perfectly impossible; and in the cases of multiple gall-stone where there has been no suppuration I do not think them in the least degree desirable. I therefore limit what I have to say to the two points of removing the gall-bladder or of simply stitching it to the abdominal walls. In cases where suppuration has made the gall-bladder contracted and firmly adherent to deep structures, its removal would be a terrible proceeding—in fact, one which in the majority of these suppurative cases could not be completed. The only argument I have found in its favour is a supposed possibility of the return of the disease. But my cases now go back as far as September 8th, 1878, and I cannot find in any of them the slightest indication of the recurrence of the disease. Even if there were any tendency in this direction, as I have secured in all these operations the base of the gall-bladder in the cicatrix, a puncture with a bleeding lancet will be quite enough to enable us again to evacuate the morbid contents of the gall-bladder if that became necessary. The more experience I have in dealing with these cases, the less necessity, it seems to me, there is for anything more than the simple process of cholecystotomy, and the extremely favourable results obtained from it seem to me to put it within the first rank of modern operative proceedings.

ELEVEN CASES OF CHOLECYSTOTOMY.

No.	Name.	Residence.	Medical attendant.	Age.	Married or single.	Disease.	Date.	Result.
31	C. F.	Stour Village	Dr. Eagar	61	Married	Suppurating gall-bladder	Sept. 11th, 1886	Died
32	E. P.	Birmingham	L. T.	30	,,	Gall-stones	Oct. 26th, ,,	Recovered
33	M. T.	Coventry	Dr. Bond	40	Single	,,	Nov. 26th, ,,	,,
34	L. H.	Wolverhampton	Dr. Lycett	43	Married	,,	Jan. 17th, 1887	,,
35	M. T.	Hawick	Dr. McLeod	42	,,	,,	Feb. 19th, ,,	,,
36	A. M.	Birmingham	Mr. Freer	46	,,	,,	March 4th, ,,	,,
37	R. McM.	Londonderry	Mr. Bernard	56	,,	,,	April 18th, ,,	,,
38	C. L.	Birmingham	Mr. Hadley	40	,,	,,	May 20th, ,,	,,
39	E. W.	Kidderminster	Mr. Stretton	55	,,	,,	June 29th, ,,	,,
40	E. S.	Birmingham	Dr. Leech	43	,,	,,	July 26th, ,,	,,
41	M.D.	Willenhall	Dr. Tonks	58	,,	Suppurating gall-bladder	Dec. 14th, ,,	,,

ON THE

MODE OF ACTION OF THE CONTAGIUM AND THE NATURE OF PROPHYLAXIS IN SOME INFECTIVE DISEASES.

BY G. F. DOWDESWELL, M.A.

IN a recent investigation upon rabies, communicated to the Royal Society,[1] a short abstract of the results of which was published in THE LANCET,[2] I have been forcibly struck with the fact that, notwithstanding the assiduous attention that has been given to the etiology of infective diseases and bacterial pathology during the last decade, the mode of action of the virus and the intimate nature of prophylaxis, have received the most scant consideration.[3] It is to this circumstance, I think, in some measure, that the want of any substantial progress in our knowledge of this subject, and especially in the methods of treatment in infective diseases, is due. This is particularly exemplified in the disease here immediately in question, though this assertion may appear paradoxical, for if it be granted that a successful method of protective inoculation has been discovered and practised by M. Pasteur, it is certain that we are still in as complete ignorance—whatever we may assume—of the nature of the contagium as we are of its mode of action.[4] I wish, therefore, to call attention to the considerations that have suggested themselves to me upon these subjects, in the hope that discussion and experimental investigation of these particular points may tend to their elucidation and be productive of practical utility.

M. Pasteur conjectures that in rabies the virus may be composed of two substances: the one a living organism capable of reproduction and development; the other chemical, "non vivante," which, "when in sufficient quantities," inhibits the development of the other.[5] This, propounded merely conjecturally, is essentially the same view as that which was originally formulated by Chauveau[6] for natural refractoriness to infection, and where he accepts Pasteur's previous "exhaustion" theory for the case of animals artificially protected by inoculation with an attenuated virus, and is very similar to the theory adopted by Toussaint to account for the refractoriness of some animals (Algerian sheep) to infection with anthrax; it is generally known as the "counter-poison theory" of protection—viz., that in infective diseases pathogenic microbes elaborate within the tissues of their host a chemical product that is inimical to their own development, protecting from their

[1] Proc., vol. xliii., 1887. [2] 1887, vol. ii., p. 680.

[3] This subject is discussed by Dr. E. Klein in his work "Micro-organisms and Disease"; and this, with the exception of the articles by Dr. G. M. Sternberg, referred to below, is almost the only one recently published in this country.

[4] That I may not appear to contradict my own statements elsewhere upon this point, I will add that to "think strongly," as I do, that a certain organic form is intimately related to the contagium, is a widely different thing from logically demonstrating their identity, as has been done in a few other cases.

[5] His words are (Comptes Rendus, 1885, t. ci., p. 765): "Se pourrait il que ce qui constitue le virus rabique soit formé de deux substances distinctes, et qu'à côté de celle qui est vivante, capable de pulluler dans le système nerveux, il y en ait un autre, non vivante, ayant le faculté, quand il est en proportion convenable, d'arrêter le développement de la première." [6] C. R. Acad. Sc., Paris, 1880, t. xc., p. 1526.

future action, and preventing a recurrence of the disease.[7] The other theory most in vogue of the causation of this immunity against infection, which was originated and advanced in the instance of fowl cholera, and of anthrax by Pasteur himself,[8] is that during the progress of the disease the microbe consumes and exhausts some constituent of the tissues requisite for its own nutriment, and that this is not regenerated during the continuance of immunity. This is known as the "exhaustion" theory. Of these views neither the one nor the other appears to rest upon any sufficient basis of experiment or observation.

The theory of the elaboration by pathogenic microbes of a chemical counter-poison is founded upon the circumstance, as shown by Wernich and others, that in an artificial cultivating medium, many saprophytes, as well as ferments, form decomposition products, which are inimical to their subsequent growth and development, and it is supposed by some who have extended the theory beyond the meaning of its originator, that a similar process goes on in the course of a micro-parasitical invasion of the animal body; this, however, has not been shown to occur in any instance, nor can there be any true analogy between the case of an organism growing in a nutrient fluid of constant finite composition, where sooner or later it necessarily exhausts its pabulum, and the case of one developing in the animal organism, the cells of which have a constant power of secretion and regeneration. It cannot be supposed here either that any one constituent of these tissues should be permanently exhausted, without any appreciable derangement of their functions, as the one theory requires, or, in accordance with the other view, that the tissues should be saturated with a foreign substance, a decomposition product, toxical to the micro-parasite, and that this substance should be retained permanently or for an indefinite time, without being excreted, and be altogether innocuous to them. Moreover, it has not even been shown that in artificial cultivations any *truly parasitical* micro-organism does form a toxical soluble decomposition product, as saprophytes do, and this is probably a constant distinction between the two classes of microbes, parasitic and saprophytic.

In the case of one disease—fowl cholera—it has been proved by Pasteur that in artificial cultivation of the contagium, a microbe, the cessation of its growth is not due to the production of a substance toxical to it, but merely to exhaustion of its nutriment. He evaporated the fluid of the exhausted growth to dryness at a low temperature in vacuo;[9] then filling it up with fresh bouillon to its original bulk, the development in it of a fresh growth of the microfungus, when inoculated, showed the absence of any product toxical or inhibitory to it. He subsequently[10] confirmed this conclusion by actual experiment upon fowls, injecting into them large quantities of the exhausted cultivation fluid, but found that they were in no way protected against subsequent infection by inoculation with the virus.[11]

In the typical case of anthrax,[12] also, the same observer has shown that though fowls inoculated with its virus are normally insusceptible to infection with it, yet that when their bodily temperature, which is usually 103° F., is reduced by placing their feet in cold water the microbe is able to develop and produce the disease; and further, when the symptoms are fully developed, by again raising the body temperature the fowl recovers, but if cooled a second time the virus becomes as active as before. This clearly appears to prove, moreover, that this normal insusceptibility of fowls to the virus of anthrax is not due to the presence in their tissues of a chemical substance toxical to the microbe, or a "counter poison," for such a substance could not be conceived to appear and disappear on slightly depressing or raising the temperature, and for similar reasons it disproves the view that in this case the virus acts (toxically) by the production of a chemical poison.

Pasteur considers that in anthrax and in fowl cholera[13] the virus acts by depriving the red corpuscles of the blood of their oxygen, as shown by the decolouration of the comb. He further says[14] that refractoriness to infection seems to him in all cases to be due to constitution, to "vital resistance," which opposes the multiplication of the microbe, the action of which as a cause of the non-recurrence of the disease he has explained[15] by its altering or destroying some constituent of the tissues, which it either assimilates or burns by the oxygen which it abstracts from the blood, comparing the condition of a protected animal to an exhausted cultivation fluid.

That the virus does act by causing asphyxia, in the cases mentioned, and in some others where it pervades the blood, appears perfectly correct; but that the protective action of a modified virus or of a mild attack of the disease should act in this manner by the partial consumption of oxygen in conferring immunity from, or an increased refractoriness to, infection is difficult to conceive; inasmuch as this view supposes the functions of the red blood-corpuscles as oxygen carriers to be permanently destroyed or impaired, and leaves only the view that refractoriness to infection is due to the "vital resistance" of M. Pasteur indeed, but that this is synonymous with the physiological functions of the tissue cells, the inherent properties of protoplasm, and power of resistance to the toxical action of foreign cells or substances, which is the only view that appears consistent with the established facts of this case and with the occurrence of induced refractoriness in other diseases by the protective action of a modified virus or the occurrence of a mitigated form of the disease. This view has been well and clearly advocated by Dr. G. M. Sternberg[16] as well as Salmon,[17] the former of whom instances the acquired toleration of the organism both in man and the horse for arsenic, and of the former for opium and many other drugs; it will scarcely be maintained that this result is due either to the presence of a chemical counter-poison or to exhaustion of one of the elements of the tissues.

Another view of the *modus operandi* of protection in infective diseases is that lately promulgated by Metschnikoff.[18] It has been termed the "scavenger" theory, and is that the leucocytes or lymph-corpuscles in the spleen or other organs eat up (hence termed "phagocytes") the invading micro-parasites; this is a form of the physiological theory, but clearly as the appearances are described and figured, and

[7] This view was not originated by Klebs, as has been said; he (Arch. f. Exper. Path. u. Pharmakol., B. 13, p. 284) merely notices briefly the articles of Pasteur, Chauveau, and Toussaint, all published during the same year in the Comptes Rendus. He designates the theory of the first named as that of "deficiency," which view he himself favours. He refers to that of Chauveau as the theory of inhibition (Hemmung) whilst, somewhat singularly, he terms that of M. Toussaint the antidote or counter-poison view, though the latter in the passage noticed (C. R., t. xci., 1880, p. 324) only says that in the case of animals artificially rendered refractory to charbon (anthrax) their blood and lymph seem to have become unfit to support the parasite; while M. Chauveau (loc. cit.) says that in Algerian sheep the microbe behaves as if the blood had become unfit for it by the presence of toxical substances. Consequently, the term "counter-poison" is more appropriate to the view of Chauveau than to that of Toussaint. The passages here in question are the first that deal systematically with the *modus operandi* of the methods of protection against infective diseases that have now assumed such a vast importance.

[8] C. R. Acad. Sc., Paris, t. xc., 1880, p. 952.

[9] Ibid., p. 248.

[10] Ibid., p. 1330.

[11] Since this was written MM. Roux and Chamberland claim to have shown (Annales de l'Institut Pasteur, 1887, No. 12, p. 563, and 1888, No. 2), in the cases of Pasteur's septicæmia and of charbon symptomatique (Rauschbrand), that prophylaxis, induced by the methods they advocate, is caused by the action of a soluble chemical substance, the product of, as they regard it, a pathogenic microbe; and M. Chauveau (C. R., 1888, p. 392) favours this view of the mode of action of prophylaxis generally. Notwithstanding the pre-eminent authority on this subject of the latter distinguished investigator, the conclusion does not appear to me satisfactory, because neither Pasteur's septicæmia nor charbon is a true and uncomplicated micro-parasitical disease, as are anthrax and Davaine's septicæmia, where the microbe constitutes solely and simply the contagium, and where one viable cell is as actively and certainly infective as an infinitely greater number; while in the former cases the micro-organism at least requires the aid of a toxical fluid, the morbid product of inflammation, and is never, according to my own observation and the statements of others, infective or actively injurious when inoculated in minute quantities, and consequently its action can only be regarded as secondary; hence these diseases are sharply distinguished from those that are truly micro-parasitical, as anthrax &c. In the case of Pasteur's septicæmia, it was shown many years ago by Drs. Sanderson and Klein (Med. Chir. Trans., vol. lvi., p. 345 &c.; see also Proc. R. Soc., 1883, No. 223) that the disease, with occurrence of the same reputedly pathogenic microbe, could be excited by intra-peritoneal injection of a sterilised chemical fluid. So that if it be considered (which is not my view) that the microbe is pathogenic, it follows that the same disease can be produced by different means, similarly to what is truly the case in the acetic fermentation mentioned below. M. Roux, in the article referred to, considers that in M. Pasteur's experiments above mentioned, prophylaxis failed through his not injecting a sufficient quantity of the fluid. This, however, is a mere conjecture, unsupported by any evidence or experiment. If it be correct, nothing is easier than to prove it experimentally; but it does not touch the previous experiment of the growth of the microbe in exhausted cultivations, which the theory of a soluble counter poison requires to be disproved. It appears to me that M. Roux's results are plainly accounted for by the circumstance, as mentioned above, that he was working upon epizootics that are not truly micro-parasitical.

[12] Op. cit., t. lxxxvii., 1878, p. 47.

[13] C. R. Acad. Sc. Paris, t. xc., 1880, p. 530.

[14] Ibid., t. xci., p. 537.

[15] Ibid., t. xc., p. 954.

[16] Magnin and Sternberg: Bacteria, 8vo, p. 246; New York, 1884; and THE LANCET, vol. i., 1885, pp. 655, 695. See also Grawitz, Virch. Arch., Bd. xiii., S. 284.

[17] Rep. U.S. Agricult. Dept. in Bot. Gaz., vol. xi., No. 6, p. 241, &c.

[18] Virch. Archiv, Bd. cvii., 1887, p. 210; and ibid., Bd. xcvii., 1884, p. 511.

probable as the conclusions of the author appear, it requires further investigation.

Similarly, too, it has quite recently been shown[19] that certain low organisms—monads—may be gradually inured to a temperature far higher than that natural, and which would have originally been fatal to them; this increased toleration for heat is not surely induced by any chemical change in the tissues of the organism, but by physiological functions altered by habit.

(To be concluded.)

ENCYSTED SEROUS PERITONITIS; ACUTE PURULENT PERITONITIS; ABDOMINAL SECTION; RECOVERY.

BY RICHARD T. SMITH, M.D. LOND.

(Reported by G. H. BURFORD, M.B.)

THE patient, a single woman aged twenty-three, came to the Hospital for Women, Soho-square, in March, 1887, with a marked abdominal tumefaction which had existed for ten years, with more definite increase during the previous eighteen months. At the initiation of the menstrual flow, in her fourteenth year, she had a severe attack of inflammation of the bowels. The general history from that time had been a disposition to menorrhagia, the periods often lasting a fortnight, and also to dysmenorrhœa of a very severe type, to use her own words, "causing her to roll on the floor in agony." She had resorted to various hospitals, being told in one that she had an ovarian tumour; also to one special hospital, where it was advised that nothing operative should be done.

On March 21st under ether a bimanual examination revealed nothing in the pelvis, but that the uterus was pushed forward and anteflexed. No definite tumour could be made out in the pelvis, or in the abdomen, but the presence of fluid in the abdominal cavity was inferred from the physical signs. The patient was pale and emaciated. This examination relit the smouldering disease. In the previous fortnight, while in residence, there had been no pyrexia, but on the evening of the 21st she had a mild rigor with a temperature of 102°, which fell to normal the next day. On the third day it rose again to 102°, associated with severe pain and rapid enlargement of the abdomen, but with no vomiting whatever. On the fourth and fifth days the existence of peritonitis with effusion of fluid was certain, the latter gradually heightening its level to the epigastric region. Vomiting of bilious fluid had also supervened, with slight jaundice. The renal secretion was very scanty. The abdomen was much distended, the girth at the umbilicus being thirty-eight inches. As the patient was in a very critical condition, Dr. Smith decided to open the abdomen and drain, which was done by the usual method on April 14th. Twenty-one pints of thick dark-brown fluid, with much pus in it, were withdrawn, the cavity freely washed out with carbolised water, and a Keith's drainage tube inserted. Below the level of the umbilicus the abdomen was become, so to speak, a simple cavity full of fluid, and lined with a thick false membrane. The small intestines were pushed upward; the pelvic viscera pressed close against the adjoining walls—the uterus, for instance, being jammed against the pubic bone. One most noteworthy phenomenon occurred. Although the urine in the previous twenty-four hours had only measured twelve ounces, the bladder was seen gradually to distend during the operation, and on its conclusion sixteen ounces of urine were withdrawn. Four hours subsequently a large quantity passed involuntarily, and a self-retaining catheter having been introduced, more than six pints were thus evacuated during the next twenty-four hours. Afterwards, for a fortnight the average quantity was about three pints per diem. The temperature fell to normal the same evening, remaining so for about a week; the patient's general condition improved steadily, and the pain and acute discomfort subsided. On the thirteenth day the glass tube was removed, an indiarubber one being substituted. The discharge now became scanty and offensive, although the twice daily washing through the tube with a 1 per cent. carbolic lotion was continued as before. The temperature rose to 101·5°, and the patient complained of nausea and faintness. Mr. Mumford, at that time house physician, removed the tube, and thoroughly washed out the cavity with a solution of boro-glyceride; by this means many large, foul-smelling flakes of lymph were expelled. In a short time the discharge became more free and perfectly sweet, the boro-glyceride solution being continued. In the middle of May the patient was able to sit up, her general health improving rapidly, and all pain and fever having quite disappeared. On June 1st she was sent to the seaside, still wearing a small rubber drainage tube four inches in length; the abdominal wound was now merely a narrow deep sinus, and it was syringed twice a day with a solution of nitrate of silver (two grains to the ounce). The intestines even now were adherent in parts, forming semi-solid bands in the abdomen. She presented herself every fortnight at the hospital for examination and oversight, and the sinus gradually closed. In October she was discharged as perfectly well, the following note being taken: "The abdomen is now quite supple, with all its natural contour and resilience; no matted coils to be detected anywhere. Scar healed; general health quite robust. The uterus is now fairly central, the fundus remaining anteverted in slight excess of its normal condition."

When seen in January last the patient was perfectly well, and was rosy and robust. Menstruation was normal and fairly easy.

Remarks.—The probability is that the encysted fluid was the remains of the inflammatory attack which she had nearly nine years previously, and there was no history of any very severe intercurrent illness. The manipulations made by several consultants in the endeavour to form a definite diagnosis provoked the active and superadded mischief. The symptoms caused the gravest anxiety. No spray was used during the operation. The relief was immediate, and, with the exception of the temporary blocking of the exit and consequent symptoms already mentioned, her progress to recovery was steady and uniform. The sinus was slow in healing. I think the use of liq. calc. chlorid. in thirty-minim doses thrice daily proved a very useful remedy.

[19] Address of the President, R.M.S., at the annual meeting, 1887.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TRAUMATIC TETANUS FOLLOWING A SLIGHT INJURY TO THE SOLE.

BY S. L. DOBIE,
SURGEON-MAJOR, 4TH MADRAS CAVALRY.

SOOBOO R——, aged twenty-five, native policeman, a strong, healthy man, was admitted into the hospital at Bellary on Jan. 3rd, 1876, with a small abscess on the sole of the left foot, under the instep. The abscess was the result of a contusion from treading on a stone with his bare foot. On admission the abscess was discharging slightly, and he was ordered a poultice. In the evening he complained of a stiff neck. This was supposed to be due to cold, and he was ordered hot fomentations and a stimulating liniment, both to be applied to the neck. During the night he did not complain, but was found at 7 A.M. on Jan. 4th sitting up in bed with his head bent back and his jaws rigid. An enema of Epsom salts, castor oil, oil of turpentine, and warm water was administered by the apothecary, and was evacuated in ten minutes. His symptoms increased in severity. At 9 A.M. he had a spasmodic attack; this passed off, leaving him, as before, with fixed jaws. I saw him at 10 A.M., and put him under chloroform, at the same time ordering a hot bath to be got ready. While he was insensible from chloroform a violent spasmodic attack came on, which stopped his breathing till his face, naturally dark brown, became blue; this passed off, and then an attempt was made to give him hydrate of chloral, but it had to be abandoned on account of the spasms it induced. At 11 A.M. the hot bath was ready, and he was kept in it till 6 P.M., its temperature being maintained during that time. While in the bath he had nearly 100 grains of chloral in forty-grain doses, and small quantities of

broth occasionally; these he had no difficulty in swallowing. He managed to get a little sleep in the bath. From the time of his being placed in the bath till his death he had no spasmodic attacks. At 6 P.M. he was put to bed. At 6.30 P.M. he was sleeping comfortably, but the muscles of the jaw and neck were still contracted. The poultice to his foot was continued. He was seen at various periods during the evening. Soon after my visit at 6.30 P.M. he woke up and had some broth; his jaws remained stiff. At 8.30 P.M. he passed his fæces in bed. At 9 P.M. he was again breathing freely. At 10 P.M. the apothecary, who had been called by the other patients, found him dead. He died quietly, apparently from exhaustion. The only notice that the other patients in the ward had of his death was that the sound of his breathing had ceased.

The man having had a spasmodic attack which nearly killed him by suffocation while under the complete influence of chloroform is worthy of notice; and so is the freedom from spasmodic attacks which followed his immersion in the hot bath, and which allowed him to take chloral and nourishment. It certainly seems probable that the hot bath did much to save him from an extremely painful death; though, perhaps, it may have added to the exhaustion from which he apparently died.

ACUTE CONJUNCTIVITIS DUE TO ANILINE.

By P. J. THOMSON, M.R.C.S., L.R.C.P. LOND.

AT 10 P.M. on May 5th, 1885, I was summoned to a hotel to see a young lady who had, I was told, been struck in the eye by a piece of aniline pencil. On my arrival, I must acknowledge that I could hardly help smiling at the ludicrous appearance of the patient. The whole of the visible portion of the left eye, both cornea and sclerotic, was of an intense violet-blue colour. There was a good deal of photophobia and a constant flow of tears, and both eyelids were intensely congested. The patient complained of great pain in the eye. In answer to my inquiries as to the way in which the accident happened, Miss H—— informed me that she was writing with an ordinary aniline pencil, and, being exceedingly myopic, she was holding her head quite close to the paper. She supposed she must have pressed rather hard on the pencil, the tip of which flew off and struck her in the left eye, and lodged, she believed, under one of the lids. If it did lodge it must have been very rapidly dissolved, for I could find no trace of it. By the following morning most of the violet colouration had disappeared, but the eye was more congested and extremely intolerant of light. On May 7th there was no trace left of the dye, but the conjunctivæ were violently inflamed, and both lids were in a state of chemosis. My notes for the following days run thus:—May 8th: Less chemosis of both lids; eye still very congested; much less pain. 9th: Left eye very red; pain at intervals in the globe this morning. 10th: Improving; slight dulness of cornea; small abrasion just above the pupil; less injection of vessels. Miss H—— left the same day for London, where she was seen by one of our leading oculists. She only recovered, so I heard, in about a fortnight or close upon three weeks after the accident.

The points which struck me most in this case were the extreme rapidity of the staining (less than a minute), and the violence of the inflammation and of the pain. The staining did not appear to have gone beyond the epithelium. I have been unable to find any record of a similar case in any of the English, French, or German papers to which I have access, and this may be a sufficient excuse for the publication of these incomplete notes.

CASE OF SCLERODERMA.

By FREDERIC C. WOOD, L.S.A. LOND.

CASES of scleroderma being comparatively rare in hospital, let alone private practice, I think it worth while recording the following case.

Towards the latter end of January of this present year Thos. S——, aged forty-two, farmer and pig jobber, came to me suffering from an incised wound of the left forearm, severing most of the superficial flexors. Under appropriate treatment this healed up in a week. About three days afterwards he again came to me complaining of pain in the left shoulder; on examining it, my hand came upon a large hard lump, situated just on the outer side of the biceps muscle. On calling his attention to it, he told me he had never noticed it before. My curiosity being aroused, I made a still further examination, with the result that I found very many more of the same peculiar lumps, varying in size from a pea to a hen's egg, the largest being situated in the left groin. He has ever since been under my observation, and at the time of writing he has many of these smaller ones situated around the ensiform cartilage of the sternum and the cartilages of the lower ribs, so much so that the part in the neighbourhood looks atrophied and cicatrised. The lumps, which are white in appearance, smooth, and scarcely, if at all, elevated above the general level, appear to invade not only the skin, but also the subjacent connective tissue. In the patient's own words, he states he feels a queer "cringing" in them; the larger ones are quite anæsthetic, while over the small ones there is a loss of tactile sensation. His family and personal history are unimportant. All the various remedies have been tried without success.

STRANGULATED HERNIA; ABSENCE OF LOCAL SYMPTOMS.

By MORGAN I. FINUCANE, M.R.C.S., L.S.A.

THE following case, I think, offers another instance of the complete absence of local symptoms in a strangulated hernia. Whether the fact that the contents of the hernial sac were composed chiefly of omentum, or the suddenness and complete strangulation of the bowel, accounts for the absence of local pain &c., my experience does not enable me to say. The case, I think, is an illustration of the necessity for complete examination in those cases where the symptoms might coincide with a tumour in the known places of hernia, even in the absence of all local symptoms. For permission to publish the case I am indebted to Drs. Crombie and Williams.

M. F——, aged seventy-two, complained for several days of general malaise, and when I first saw her she had vomited several times the previous day and also on the morning of my visit. The bowels had not been moved for two days. She complained of pain in the stomach; thick white fur existed on the tongue; the temperature was normal. In answer to inquiries, she said there was no swelling lower down, and the bowels had always been very irregular. Looking upon the case as one of simple constipation, she was ordered a little white mixture. On visiting her the next morning, she still complained of persistence of vomiting, which she said had become black, and on examination of the vomit it was found to be fæcal. The twisting pain over the abdomen was increased. On examination of the inguinal and femoral regions a small tumour, about the size of a small egg, was found in the left groin, dull on percussion, and painless on manipulation; indeed, the patient, when her attention was drawn to the tumour, denied ever having had any swelling there before, or any pain or uneasiness in that region at all. The usual remedies of taxis, opium, ice-bag, &c., having been tried and failed, Dr. Crombie performed herniotomy. The sac was found to contain very little fluid, and to be closely packed with omentum and a small portion of bowel. The bowel was with difficulty reduced, owing to the tightness of the constriction at the neck of the sac and the adherence of the sac to the omentum. The symptoms were to some extent relieved; the woman, however, died forty-eight hours afterwards.

PRESENTATIONS.—Dr. Williams, the medical superintendent of the County Lunatic Asylum at Haywards Heath, on severing his connexion with the establishment, with which he has been connected for over twenty-two years, has been presented with an illuminated address in the form of an album, signed by the officers and staff, numbering upwards of one hundred.—On the 31st ult. a deputation of the members of the St. John Ambulance Association waited on Dr. R. Muir Gilchrist Binney, at Meadowfield, Durham, to present him with his portrait and an illuminated address for his energetic and earnest instruction in ambulance work.—On March 29th, Mr. J. William Parry, L.R.C.S., L.R.C.P. Ed., &c., was presented with a purse of sovereigns by the Bagillt members of the St. John Ambulance Association (North-Wales centre) in recognition of his services as surgeon instructor during the past winter months.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

A CASE OF REMOVAL OF THE CLAVICLE FOR RECURRENT SARCOMA.—LIGATURE OF THE COMMON CAROTID AND SUBCLAVIAN ARTERIES FOR INNOMINATE ANEURYSM.

(Under the care of Mr. HEATH.)

FOR the following notes of the cases we are indebted to Mr. Bilton Pollard, surgical registrar.

The operation of excision of the clavicle must occasionally be numbered amongst the most formidable of those which the surgeon is called upon to perform in the removal of parts affected by tumours. Besides the risk of hæmorrhage from accidental wound of some of the important vessels in close proximity to the bone, there is the danger of entrance of air into veins, and later the chance of septic inflammation of the cellular tissue exposed. These risks, and the subsequent fear of inflammation, were avoided in the following case, and the operation was most successful, death being due to the onset of disease in another part, of which there was no evidence before operation.

CASE 1. *Recurrent sarcoma in clavicle; excision of clavicle; death from secondary growth in brain.*—W. S——, aged thirty, was admitted on February 2nd, 1888. He stated that a tumour had been removed by Mr. Eve from the tissues over the outer part of his left clavicle, at the Royal Free Hospital, three years and ten months ago. The primary growth had been present for twelve months before its removal. The patient had continued well till last October, when he had an accident and broke his left clavicle. Soon after that date a swelling of the clavicle was noticed.

On admission to University College Hospital there was a scar three and a half inches long over the outer part of the clavicle. The clavicle was broken about the middle, and the inner end of the outer fragment was displaced inwards behind the outer end of the inner fragment. Surrounding the broken ends there was a soft solid growth, measuring an inch and a half in diameter; distinct expansile pulsation could be detected in it. The inner fragment of the clavicle was much enlarged. No enlarged lymphatic glands could be found. There were no symptoms attributable to the nervous system, and no signs of internal recurrence.

On the sixth day after admission Mr. Heath made an incision along the entire length of the clavicle, and he then divided the attachments of the pectoralis major, deltoid, trapezius, and sterno-mastoid muscles. The anterior part of the capsule of the sterno-clavicular joint was divided with the knife, and the posterior part was torn through with a periosteal elevator; the sternal end of the bone was then prised up and the rhomboid ligament divided with a scalpel. The sternal end of the bone was then wrenched forwards and torn free from the subjacent tissues. The acromial end was easily separated from the subjacent tissues, disarticulated, and removed. During the latter part of the operation the transverse cervical and supra-scapular arteries were exposed and the former wounded A double ligature was applied. The subclavian vein and the commencement of the left innominate lay at the bottom of the wound, but they were in no way injured. The bleeding points were tied. The wound was dusted over with iodoform, sutured, drained from the outer angle, and dressed with iodoform wool. A pad of wool was placed in the axilla, and the arm was bandaged to the chest. Except at its extremities, the clavicle was infiltrated with sarcomatous growth, which was composed of a mixture of round and spindle-shaped cells.

The wound was dressed on the second, fifth, and seventh days after operation. The tube was shortened on the second, and removed on the fifth, day. The patient remained in a drowsy state after the operation, and this gradually passed into coma. The temperature rose to 102·8° on the second day, and ranged between 98·8° and 101·8° until the seventh, when it again reached 102·8°; it then rose steadily and reached 106·2° just before death on the eleventh day. The pulse-rate ranged between 126 and 170. On the ninth day after the operation there was well-marked optic neuritis of both eyes; the discs were swollen, and there were small hæmorrhages along the course of the vessels radiating from the discs. Dr. Bastian diagnosed a secondary growth in the brain. On the morning of the eleventh day both pupils were dilated and inactive to light. The right arm was rigid; the left arm was included in the bandages and was not examined; both legs were paralysed and limp; knee jerks were absent on both sides; there was slight ankle clonus on the left side. The patient died at 1 P.M. on the eleventh day after the operation.

The necropsy was made twenty-five hours after death. The wound was soundly healed and quite dry. The right hemisphere of the brain was much more prominent than the left, and the convolutions were much flattened. The veins of the right side of the cerebrum were engorged with blood. There was distinct bulging towards the middle line of the inner surface of the right frontal lobe, and on section a round mass of growth about the size of a walnut was found in the white substance of the frontal lobe. No other growths could be found in the brain. There was no excess of fluid in the subarachnoid space or in the ventricles. There was a secondary sarcomatous growth in the apex of the left lung close beneath the clavicle; there was another mass at the base, a third at the root, and other scattered patches. In the right lung there was a number of small growths, varying in size from a pea to a Barcelona nut. The optic discs and retinæ presented the appearances observed during life. The other organs were healthy.

In connexion with the following case we cannot do better than reproduce shortly some recent remarks on the subject of operation in supposed innominate aneurysm by Mr. Heath himself, the conclusion to which he then came being fully supported by the case: "Simultaneous deligation of the two main trunks, on the other hand, seems to have produced a cure in two cases of Barwell's and one of King's, and to have given great relief in several other instances, both of innominate aneurysm and of aneurysm which proved eventually to be mainly aortic. Whatever may be the correct theory of the action of the distal ligature, there can be no doubt that the double distal ligature does produce a marked effect upon aneurysms presumably innominate, and that this is the best operative method to be pursued."

CASE 2. *Innominate aneurysm; ligature of carotid and subclavian arteries; relief.*—F. W——, a man aged thirty-three, was admitted, under the care of Dr. Bastian, on Oct. 18th, 1887. He had been in the army for eight years, but during the last six years he had worked in Covent-garden Market, where he had to lift very heavy weights, sometimes as much as two hundredweight. He contracted syphilis ten years ago. He dates his present illness from twelve months ago, when he began to suffer from pain in the right side of his neck. During the last two or three months he had suffered pain in both his shoulders and in his right arm and forearm, and during the same period he suffered from an aching pain about his right sterno-clavicular joint. During the last six months he had noticed a gradually increasing weakness in his right arm. Latterly his voice had lost strength, and swallowing and breathing had been difficult. He afterwards noticed some unnatural projection of his right clavicle.

On admission the patient had well-marked stridor during inspiration and expiration when breathing deeply. The sternal end of the right clavicle was displaced forwards and upwards, and at this situation, as well as in the supra-sternal and right supra-clavicular fossæ, distinct expansile pulsation could be felt. There was deficient resonance over the upper half of the manubrium; a systolic bruit was audible over the swelling; the physical signs in regard to the heart were fairly normal; the arteries were firmer than natural, and pulsation was visible in the brachial vessels. The patient was kept in bed and treated by restriction, diet, and iodide of potassium. After six weeks' treatment the patient's condition was unchanged. He was transferred to Mr. Heath's care for surgical treatment. During the next fortnight the symptoms became aggravated. Breathing was very difficult, and the man was obliged to sit up in bed; he had a good deal

of bronchitis; his right radial pulse was rather weaker than the left; he slept badly at night.

On December 7th Mr. Heath ligatured the third part of the subclavian artery, and then tied the carotid artery above the omo-hyoid muscle. Both vessels were tied with silk. Each wound was stitched, drained with a small tube, and dressed with iodoform powder and salicylic wool. The right arm was wrapped up in cotton wool, and supported by a sling.

The temperature rose to 100·6° on the fourth day after the operation: it then fell, and was normal on the seventh day. The wounds were dressed on the second day, and the tubes removed. Both healed rapidly without any suppuration. For the first five days after the operation the patient was troubled with cough and difficulty in breathing; he had a good deal of bronchial secretion, which greatly hampered his breathing; his pulse was irregular and intermittent. On the sixth day the patient's condition was much better; his breathing was much easier, and his cough had ceased; his pulse, though still rapid (100 per minute), was regular in force and frequency. He got up for the first time on the twenty-second day after the operation. On the fortieth day the condition of the aneurysm was noted as follows:—The swelling above and internal to the right sterno-clavicular joint is much less than before the operation; the pulsation at these places is also less. The swelling extends more along the clavicle and the impulse over the middle of that bone is more marked. The aneurysm has decreased in size in its former position, but in all probability it has extended deeper and spread towards the arch of the aorta. On the forty-third day the patient's cough was more troublesome and interfered with sleep; he expectorated a good deal of watery mucus; his pulse was again irregular, and every third beat was missed. The patient was discharged on the fifty-first day after the operation. The condition of the aneurysm was unchanged since the fortieth day; there was still no radial pulse on the right side, but the arm maintained its proper temperature. The patient expressed himself as feeling fairly well; he was better able to swallow, and his breathing was very much easier than it had been for several months before the operation; he did not require to be propped up in bed, as was the case before the operation; and he could move his right arm more freely than before.

KENSINGTON INFIRMARY.

A CASE OF PHLEGMASIA DOLENS; NECROPSY.

(Under the care of Mr. VAN BUREN.)

MRS. E.W——, aged thirty-five, was admitted on March 5th. She had given birth to her ninth child three weeks previously. The labour had been long and tedious, and accompanied by severe flooding.

On admission the woman's condition was of a very grave character. She was markedly anæmic, and had that dusky heavy look so typical in severe puerperal disturbances. The right leg was considerably swollen from foot to hip; it was of a sallow colour, hard, not yielding to pressure, and the prominent superficial veins gave it a marbled aspect. The temperature was 104·5°; pulse 140; respiration 40. The urine was acid; sp. gr. 1020; no albumen. She complained of slight pain in the leg. The tongue was dry and fissured, and in a general typhoid condition. Sickness was a marked symptom, as was also diarrhœa. She stated that the attack had been ushered in, with shivering, headache, and general febrile sequelæ. She had never suckled the child, there being no secretion of milk from the first. The lungs and heart yielded no physical signs of disease. The spleen was thought to be enlarged, and there was slight tenderness on the right side of the uterus. The limb was ordered to be fomented with warm lead lotion and wrapped in cotton wool. The rest of the body to be sponged with iced water. Sulphate of quinine was administered in ten-grain doses every four hours, with a view of bringing down the temperature. Dover's powder was also given, in ten-grain doses twice a day, to control the diarrhœa and produce sleep. She was obviously in such a low condition that stimulants were certainly called for, and six ounces of brandy were ordered to be taken every twenty-four hours. The rest of the diet consisted of beef-tea, milk, eggs, and soda-water, which were ordered to be given iced. She kept the quinine down, and after sponging the temperature fell to 102°. The night nurse reported a fair night's rest, and cessation of sickness and diarrhœa. The temperature fell still further to 101·4°. She was certainly better when seen on the morning of the 7th. Pulse 128; respiration 32. On the evening of this day she had a rigor, which lasted an hour, and the temperature went up to 104·2°. Pulse 144; respiration 42. Diarrhœa set in, and sickness prevented food being administered by the mouth. Fine crepitations were detected at the bases of both lungs, but there was no cough or expectoration. Owing to pains in the leg, which the patient thought were aggravated by fomentations, these were omitted, and cotton wool only applied. She had little sleep that night. On the morning of the 8th she was in a sinking condition; diarrhœa and sickness still persisted. The nurse stated that there was a discharge from the vagina for the first time, which resembled ordinary menstruation. The pulse was very fluttering and feeble, and, gradually passing into a comatose condition, she died at 12 o'clock, the temperature just before death being 101·4°.

Necropsy.—The body was well nourished, the only external sign of disease being the swelling of the right leg. The bases of both lungs were in a state of engorgement, but there was no consolidation. The heart was normal, and no clots were found in the pulmonary arteries. The liver was distinctly fatty, as were also both kidneys. The spleen was slightly enlarged and in a state of active hyperæmia. On section, it was soft, diffluent, of a dark-red colour, and extremely vascular. The uterus was found to be the seat of interesting changes. Distinct signs of endometritis were found in the mucous membrane. At the placental site, which was situated to the right, purulent infiltration of the uterine wall had occurred, and there had evidently been active inflammation at this site. On making a section pus welled out, and the surrounding tissues were considerably softened. In the right iliac and femoral veins thrombi were found.

Remarks by Mr. VAN BUREN.—Fatal cases of phlegmasia dolens are so rarely met with, and the opportunites of performing a necropsy necessarily so few, that when one does meet with a case that can throw any light on the pathology of the disease it should be availed of to its utmost limits. In the Kensington Infirmary during the last three years I have watched about 450 labours. Puerperal septicæmia has occasionally, unfortunately, been present, but it has never assumed the form of the present case. I look upon the placental site as the primary source of infection in this case. The history of flooding at the labour is important,, as this would favour the tendency to thrombosis by interfering with the nutrition of the walls of the vessels. The placenta being situated to the right side explains the right leg being affected, and is in itself interesting. Had there been no swelling of the leg, I should have been unable to distinguish this case from one of ordinary puerperal septicæmia. The rigors, high temperature, and condition of the spleen point to this. The patient was addicted to alcohol, I believe, which would account for the appearance of the liver and kidneys; fatty degeneration of the latter organs is undoubtedly a rare occurrence. The inflammation of the lungs was probably the result of hypostatic congestion. I regret now that I did not syringe out the uterus with an antiseptic, and I shall certainly bear this in mind in future cases; and probably the loss of blood was so great at the confinement that transfusion would have been of service, and lessened the tendency to thrombosis.

LINCOLN COUNTY HOSPITAL.

CONGENITAL DEFORMITY OF THE NAILS (ONYCHOGRYPHOSIS).

(Under the care of Mr. SYMPSON.)

IN November, 1887, a school-girl (Susannah S——), aged eleven, applied, on account of some slight ailment, as a casual patient at the Lincoln County hospital, when Mr. Matthew Johnston, the then house surgeon, noticing that she was the subject of a peculiar condition of the nails, referred her to Mr. Sympson.

On examination, the girl's hands were seen to be normal as to form and size. The nails projected upwards and forwards from their matrices to the distance of from one-half to three-quarters of an inch, so as to present the appearance of claws. The mother stated that the nails grew rapidly, and that when they were cut a quantity of clear fluid exuded,

and they became very sore. (Fig. 1.) The feet were well formed, but the nails of the toes presented features similar to those of the fingers, excepting that they were shorter, being about a quarter of an inch in length. There were some abrasions and corns on the feet and toes, through

FIG. 1.

difficulty in obtaining boots that would fit. (Fig. 2.) There was some diffused redness with thickening and cracking of the skin over each olecranon. There were a few warts over the right supra-spinatus muscle. The mother said that the child had been subject to skin eruptions ever since she had been vaccinated. The child had not had cleft

FIG. 2.

palate; she cut her teeth, which were normal, in good time. She was either extremely reserved or else not very intelligent. The girl was born at full time. The malformation of the nails was present at birth. Her father and mother are healthy. She has five brothers and one sister, all of whom are healthy and well formed, and there is no evidence of her other relatives having any malformation whatever. The knee-jerk was slightly exaggerated on the left side, normal on the right. There was no ankle-clonus or supinator reflex. The electric reactions of muscle and skin were normal. Ophthalmoscopic examination revealed nothing abnormal, save that the choroidal ring was very distinct.

ILKLEY HOSPITAL AND CONVALESCENT HOME.—The twenty-sixth annual report for 1887 states that the number of patients admitted during the year was 968. No death had occurred. The working expenses were £1378 2*s.* 3*d.*, and the total receipts £1032 12*s.* 3*d.*, showing a deficit of £345 10*s.*, which had been met out of income from other sources, and which had absorbed all the donations with the exception of two life donations. A resolution, thanking Dr. Johnstone, the medical officer, for his services, and that a gratuity of £50 be given him in acknowledgment of the same, was agreed to.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Double Nephro-lithotomy.—Splenectomy.

AN ordinary meeting of this Society was held on Tuesday last, Sir E. H. Sieveking, F.R.S., President, in the chair.

Mr. HERBERT W. PAGE read a case of Double Nephro-lithotomy, in which Lateral and Median Lithotomy had been previously performed, with remarks on Sympathy between the Kidneys. A man aged twenty-two entered St. Mary's Hospital in November, 1886. For ten years he had suffered pain in the region of the left kidney, with occasional attacks of left renal colic. In 1882 he began to pass gravel and to suffer from irritability of bladder, and in 1885 a small calculus was removed from the bladder by lateral lithotomy. Symptoms of vesical calculus soon recurred, together with pain in the left loin, and his general health became much broken. His urine contained pus and occasionally blood. Left calculous pyelo-nephritis was diagnosed in addition to stone in the bladder, and this was accordingly removed by median incision on Dec. 4th, 1886. On the 15th the left kidney was exposed in the loin and two small calculi were removed from a large suppurating cyst. The amount of pus, however, did not materially lessen, and towards the end of January he began to have pain in the region of the right kidney, from which it was soon suspected that the pus now came. On Feb. 18th he was attacked with violent pain in the right loin, with rigors, vomiting, and high temperature. At the same time the pus almost entirely disappeared, and his urine dropped from forty-two to twenty ounces. It was believed that this urine was furnished by the left kidney only. The symptoms increased and there was fulness in the right loin. On Feb. 25th the right kidney was exposed; it was found much enlarged and surrounded by fetid pus, and there was an opening into the pelvis from which an abscess had probably burst into the perinephral tissue. No stones were found. He did well after this operation. The urine steadily increased in quantity, the pus diminished, and his pain ceased. He left the hospital on May 26th, and a few days afterwards he passed four small calculi per urethram. From that time he made steady progress towards recovery. The case is of interest from its bearing on the question of sympathy between the kidneys, and it was suggested that in this case the right kidney had in all probability contained calculi, though without giving rise to symptoms, for some considerable time, and that its condition was revealed by the operation on its fellow. In support of this view the author referred to a case recently under his care in which the presence of calculi was first made known after the operation of hysterectomy, undertaken by the late Dr. Meadows. Reference was made to other cases in which there was a somewhat similar sequence of events. From another point of view Mr. Page considered this case of importance in its bearing on nephrectomy and preliminary abdominal exploration. Nephrectomy, as time proved, would have been in this case a very wrong thing, but he had never felt quite satisfied that abdominal exploration, by which he would have found an apparently useless left kidney and a right kidney so enlarged as to be presumably fit for all future needs, its calculi being, moreover, so small as to elude detection, might not there and then have led to nephrectomy. The patient would have been placed thereby in a position of infinitely greater danger when at a future day the right kidney was in its turn *hors de combat*. The case thus demonstrates with how many precautions and with what consideration abdominal exploration for the examination of kidneys must be made.—Mr. RICKMAN J. GODLEE concurred in the views expressed by the author, and urged the advisability of not performing nephrectomy. Disturbances in the abdomen, however, resulting, might mechanically explain the development of symptoms of calculus latent hitherto.—Mr. PAGE, in reply, considered there was no such thing as pure sympathy between the kidneys any more than existed between the kidney and any other viscus. In his case abdominal exploration might have led astray by finding the left kidney to be so diseased as to be useless, and even some of his colleagues advised nephrectomy, which would have been bad for the patient, since at the nephro-lithotomy on the right organ the diseased left kidney probably helped to carry off some of the

secretion, thereby proving itself a useful though crippled organ. He agreed with Mr. Godlee's mechanical explanation.

Sir T. SPENCER WELLS contributed some remarks on Splenectomy, and reported a case in which he had successfully removed an enlarged spleen from an unmarried woman, aged twenty-four. He appended remarks upon the details of the operation, especially upon the mode of securing the blood-vessels, and upon the progress of splenectomy before and since the periods of anæsthesia and antiseptics. The gastro-splenic omentum was first secured by pressure forceps, then transfixed, and the four ligatures tightened after the spleen had been removed. He adds the following table, prepared by Professor Adelmann, to show how in fifty-three cases, recorded up to June, 1887, the result was influenced by the nature of the disease which led to operation:—

Disease.	No. of cases.	Recoveries.	Deaths.
Hypertrophy with leukæmia ...	19	1	18
Simple hypertrophy	14	1	13
Malarial hypertrophy	4	1	3
Wandering spleen	9	7	2
Splenic cysts	4	3	1
,, hydatid	1	1	—
,, sarcoma	1	1	—

He concludes that, as the results of splenectomy have gone on improving during the last thirty years, we may hope that, with increasing knowledge and greater experience, still better results may be obtained—and sufficient facts have already been accumulated to prove that patients who recover from the operation may live in good health for many years without a spleen.—Mr. MEREDITH related the particulars of three cases of splenectomy at which he had assisted. He praised the method of transfixion of the pedicle adopted as giving more scope for careful ligaturing. A long gastro-splenic omentum was most favourable for operation; hence the great success of splenectomy for wandering spleen. He would not operate in the presence of very serious blood conditions—e.g., marked leukæmia.—Mr. WARRINGTON HAWARD discussed the importance of attending to the state of the blood. The symptoms were to be attributed to the size and mobility of the spleen. In wandering spleens the disturbance of the sympathetic plexus might be less owing to the great length of the gastro-splenic omentum; hence, also, these cases were more favourable for operation. He commended the use of the pressure forceps before applying the ligature.—Dr. ANGEL MONEY said that Hayem had detected considerable leucocytosis in all morbid processes attended with cellular production—e.g., inflammatory neoplasia, sarcoma, and carcinoma.—Dr. MARTIN ROOKE explained the intermittent attacks of jaundice by the pull exercised intermittently on the portal and vessels by the large tumour.—Dr. A. H. N. LEWERS referred to the difficulty in diagnosis, and said that the discovery of an enlarged spleen when a uterine tumour was suspected should lead the operator to reflect on the great mortality as compared with the removal of ovarian or uterine tumours.—Dr. DAY referred to the influence of anæsthetics on the subsequent convalescence, which might be delayed by their injudicious administration. The patient in this case only took three drachms of bichloride of methylene. He believed the fever was partly due to over-feeding.—Mr. GODLEE suggested that the large tumour might have caused jaundice by mechanical means.—Sir SPENCER WELLS, in reply, pointed out the large size of the spleen in some of his cases. He attributed the fever to the influence of menstruation, which in this particular case was delayed. He always avoided operating, if possible, till after the menstrual period.

MEDICAL SOCIETY OF LONDON.

Ulcerative Endocarditis.—Pathology of Rheumatism.

AN ordinary meeting of this Society was held on April 9th, Sir William Mac Cormac, President, in the chair.

Dr. ORD read the notes of a case of Ulcerative Endocarditis. The patient, a young woman aged sixteen, had been out of health for several years, but had had neither acute rheumatism, chorea, nor scarlet fever. Her main symptoms were a systolic mitral murmur, increasing in loudness under observation, enlargement of the heart on both sides, with signs of some pericardial effusion, enlargement of the liver and spleen, and dropsy of the lower limbs. The urine never contained any albumen, blood, or other indication of renal mischief. The temperature during her stay in the hospital was always high in the evening (102° to 104°, or more), and from 97° or 98° to 100° in the morning. She died after a little more than three months' stay in hospital, suddenly, of syncope, never having had hæmoptysis or sign of mischief in the brain. The differential diagnosis was discussed, and the reasons which led to that of ulcerative endocarditis were stated. The heart, carefully prepared by Mr. Shattock, was exhibited. It showed very extensive lesions of ulcerative endocarditis, affecting the mitral valve, and extending far into the left auricle. At the post-mortem examination large infarcts, recent and old, were found in the spleen, and both kidneys were greatly enlarged, and pitted with the scars of infarcts. Dr. Ord drew attention to the remarkable fact that, while the kidneys were so much diseased, the urine presented no sign thereof till the very day of the patient's death.

Dr. ANGEL MONEY read a paper on the Pathology of Rheumatism. From time immemorial it had been taught that rheumatism affected the fibrous and serous tissues of the body, and he explained this selection on anatomical grounds. He asserted that one of the essential anatomical lesions of rheumatic fever was a vascular one, and a hyperæmia produced in the fibro-serous structures tended less to pass away than a capillary congestion of less vascular tissues, and therefore gave rise to more permanent changes. He referred to the mutability of the phenomena of this affection, both with regard to time and to space; its lesions were often transitory, and likewise migratory or erratic. Suppuration never happened to a purely rheumatic manifestation; when it occurred in the course of acute rheumatism it was due to a combination of the rheumatic with septic poison. A systematic investigation of the cutaneous sensibility in this disease was at present wanting. He had found that over the inflamed joints the acuteness of tactile sensation and of pain was increased; the power of localisation was disturbed, increase not being discoverable by the æsthesiometer; complete analgesia was at times a marked phenomenon, and might be associated with hysteria; sensation of cold was usually diminished, that of heat exaggerated; faradic sensibility was diminished or even completely abolished; this was most marked about the joint, but it might be also over the whole limb. Anæsthesia of various structures, other than skin and mucous membrane, had been noted. In regard to the perspiration, there were numerous varieties of odour, and some of these were due to an unclean condition of the palms and soles. He quoted a case in which a scarlatina-like rash came out on the sixteenth day of a rheumatic illness, the eruption being attended by shivering, and the patient likewise suffered from pulmonary consolidation and pericarditis. It was difficult to prove that the rheumatic poison affected the spinal cord and its membranes, yet bilateral sciatica, lumbar pain, and weakness of the calves, associated with pyrexia, had been recorded. Among peculiarities there had been observed transient loss of sight, and what might be called hemi-rheumatism, where the joints were affected on one side and the cutaneous surface on the other. Chorea was more common as an associate of the rheumatism of children, whilst in adults this was probably represented by cerebral rheumatism, though in grown-up people reflex twitchings (allied perhaps to chorea) were common.—Sir WILLIAM MAC CORMAC bore witness to the non-liability of rheumatic joints to suppuration. He inquired if the limit of transition of electric sensibility was gradual or sudden.—Dr. ORD had seen rheumatic joints with bones exposed and stripped of cartilage which did not suppurate. He thought that both rheumatic and chronic rheumatoid arthritis might be due to two factors: (1) a definite tendency in certain people to have inflammations take on a peculiar character—e.g., in gouty subjects the tendency was to chemical rather than to morphological change, and in rheumatic people the tendency was to inflammation without suppuration; (2) this inflammation was set going by the influence of the nervous system. Sir William Gull had shown that rheumatic perspiration often varied in reaction in different tracts of skin of the same subject. He quoted a case of rheumatic fever associated with lactation in which application of belladonna for suppression of the latter was followed by glycosuria.—Dr. MONEY, in reply, said the transition of electric sensitivity was gradual. He thought the first element in the causation of rheumatic fever was a blood-poisoning, perhaps from "fatigue products," the result of nitrogenous tissue metamorphosis; and the nervous system furnished the second causative element, the autogenetic poison exerting a selective action on certain parts of the nervous apparatus.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING was held on April 4th, Dr. John Williams, President, in the chair.

Dr. CULLINGWORTH exhibited a Thick-walled Cyst behind the Uterus, which lay embedded in the Anterior Wall of the Cyst.

A report was read on Mr. Sidney Harvey's Specimen of Interstitial Gestation, exhibited at the January meeting.

Scarlatina during Pregnancy and in the Puerperal State.—The adjourned debate on Dr. Boxall's series of papers was resumed and concluded.—Dr. GALABIN noted the remarkable absence of mortality in Dr. Boxall's cases, but brought forward statistics to show that the general belief in the danger of puerperal scarlatina was not incorrect. The favourable results in Dr. Boxall's series might be explained either as due to the excellent antiseptic precautions, or to the mild type of the epidemic. Experience proved that puerperal scarlatina was sometimes mild, where no antiseptics were used; on the other hand, there might be much pelvic complication, and Dr. Galabin had twice seen fatal peritonitis appearing during desquamation. He considered that evidence concerning the marked form of scarlatina resembling septicæmia was conflicting. There appeared to be a fascinating simplicity in arguing that scarlatina and septicæmia are two distinct specific diseases, the one inconvertible into the other. Yet septicæmia was not one disease but a group, comparable rather to all the zymotic diseases together than to scarlatina or erysipelas alone. About twenty microbes had been described as the active agent in different forms of septicæmia, which must be defined as including the effects of all germs except the specific agents in named zymotic diseases. Hence septicæmia did not represent a definite entity, like scarlatina. In the latter disease, again, Cheyne found the common microbes of suppuration in the blood not unfrequently. Dr. Matthews Duncan had shown that, according to the Registrar-General's reports for London, there was no increase of puerperal fever in proportion to that of scarlet fever or erysipelas; this was strong evidence that scarlatinal poison could hardly produce a disease simulating puerperal septicæmia. Dr. Galabin believed that at least the above fact proved that scarlatina was not numerically an important cause of puerperal fever; if it did not account for over 5 or 10 per cent. of all cases, it would not be manifest in statistical charts. There was strong evidence of a bacterial relation of erysipelas to puerperal fever; and Dr. Galabin brought forward evidence which tended to prove that scarlatinal poison might produce a disease simulating puerperal septicæmia.—Dr. HORROCKS quoted reports of the Guy's Hospital Lying-in Charity, which showed the rarity of scarlet fever of the ordinary type in the puerperal state; and he asked how many women were confined during the time that Dr. Boxall's cases were collected. Some of those cases were possibly not scarlatinal, or else represented very mild scarlatina. He believed that the incubation was not shortened when infection took place during labour; but inasmuch as the poison there could generally enter the system at once, the incubation began immediately, and so the fever developed within a few days after the exposure. He discussed at length the subjects of Dr. Boxall's series of papers, noting corroborative evidence and indicating sources of fallacy.—Dr. CAYLEY thought that there was no sufficient evidence that the poison of scarlatina was capable of directly causing septicæmia. Cases of scarlatina following operations, and of operations on patients suffering from scarlatina, had usually done well at the London Fever Hospital. Very few cases of puerperal scarlatina had been admitted into that institution, and in two alleged cases where there were acute septicæmic symptoms diagnosis was doubtful.—Dr. CHAMPNEYS testified to the great care with which Dr. Boxall had studied his series of cases, never neglecting to trace the history of each case after discharge from hospital. Dr. Champneys noted that the paper contained the analysis of a series which occurred during one epidemic. Different conclusions would probably be drawn from the record of the cases seen in consultation, for the very fact of consultations implied picked bad cases—in other words, series should be compared with series. Dr. Champneys then made some observations on the question of scarlatina puerperalis, and criticised the accuracy of Collective Investigation Reports, which represented opinions formed by hundreds of men of different views. Dr. Cayley's valuable evidence was unfavourable to the opinion that the septicæmic variety of scarlet fever existed.—Dr. JAMISON agreed with Dr. Boxall's views; he thought that the best diagnostic difference between scarlatina and puerperal septicæmia was to be found in the retina, for retinal hæmorrhage was almost a constant occurrence in septicæmia, and all but invariably absent in scarlet fever. Extreme antiseptic precautions were impossible in ordinary practice, and fortunately scarlet fever was neither very readily communicable to puerperal subjects, nor very severe when they took it.—Dr. W. J. COLLINS was no great believer in the absolute specificity of scarlet fever, and hinted that a process of evolution might affect the *materies morbi* of specific diseases.—Dr. HAYES insisted on the entire distinctness of scarlatina and septicæmia, and, in his experience, puerperal cases were not highly susceptible to scarlet fever.—Dr. WEST distrusted theories about the evolution of diseases, and maintained the specificity of scarlet fever. He had seen much of puerperal fever, but had never come across a case which could be traced to the contagium of scarlet fever, a disease with which he might claim to be very familiar. The pregnant, parturient, and puerperal woman was, undoubtedly, not highly susceptible to the contagium of scarlet fever. Only two cases, which he related, represented Dr. West's personal experience of scarlatina in pregnancy or after delivery.—Dr. CHALMERS stated that, in connexion with disturbances in the puerperal condition, he had observed that septicæmia in the lying-in woman was associated with, and apparently gave rise to, a variety of pathological conditions amongst those in attendance; again, when scarlet fever assailed the mother, Dr. Chalmers found that it never ran its natural course. He did not believe in the absolute specificity of disease, and did believe in the existence of a puerperal septicæmic form of scarlet fever.—The PRESIDENT observed that it must ever be borne in mind that some epidemics of scarlet fever were mild and others severe; that infection from a mild case may give rise to a most malignant form; and that scarlet-fever poison may give rise to septicæmia, but in a secondary manner. He compared Dr. Boxall's series with evidence brought forward from other sources in the course of the present discussion. In the latter case, the patients had been seen often but once or twice in consultation, or under circumstances where thorough observation was impossible, accuracy of diagnosis questionable, or where antiseptic precautions were not employed. In Dr. Boxall's cases, the course of the disease had been observed throughout, and antiseptic precautions thoroughly and successfully carried out. In the course of an epidemic of scarlet fever, that disease had attacked some of the patients in a lying-in hospital, where sepsis had been stamped out, and in every instance had produced scarlet fever, and not septicæmia. On the other hand, we learned that, when lying-in patients were exposed to septic infection and to scarlet-fever poison, septicæmia was present in all, whether scarlet fever was present or not. Since the reading of Dr. Boxall's paper, Dr. Meyer, of Copenhagen, had published a report of an outbreak of scarlet fever in the lying-in hospital of that town. Twenty-one cases were attacked, yet they all ran the usual course of scarlet fever. In support of the view that scarlet-fever poison produced septicæmia, not a single case had been noted where this result had been brought about under circumstances where all possibility of septic infection had been excluded.—Dr. BOXALL, in reply, first thanked the Society for the attention bestowed on his paper. He founded his diagnoses on a definite chain of phenomena, and not on the rash alone. Turning to the comparative immunity of pregnant and parturient women to scarlatinal infection, he stated that when obstetric assistant at the University College Hospital he visited a recently delivered mother; three of her children lay in her room ill with scarlet fever, and he caught the fever himself, but the woman escaped. He did not deny that the period of incubation might be prolonged in pregnancy, but showed that evidence in favour of the theory was defective. With reference to the severity of scarlet fever in the puerperal state, Dr. Boxall quoted the Collective Investigation record as evidence of unusually severe cases. He recognised that the cases in his series were of a mild type, with one exception, and stated that during the same epidemic three cases occurred in private patients, two of whom died of the fever. He did not attribute the severe cases to direct inoculation through the pelvic tissues, and the mild to ordinary infection; nor did he believe that of necessity the two forms represented two

really distinct diseases. He reminded the Society that very great variations in the character of the fever were well known to exist in children, in men, and in women neither pregnant nor parturient, and until these varieties were explained, the anomalies which occurred in scarlatina during pregnancy and parturition could not be understood. Turning to the septicæmia question, Dr. Boxall maintained that the direct effect of scarlatinal poison was the production of scarlatina and not septicæmia in lying-in women; but the former, like all fevers, was apt to favour the onset of septicæmia at a subsequent stage. Coincidence was readily explained: scarlet fever could not protect a woman in childbed, but that such an association was none other than accidental was borne out by the fact that when the septic element was eliminated scarlatina and not septicæmia was the result. The contention of Dr. Playfair that the modification of individual scarlatinal manifestations was contingent on the antiseptic treatment of the puerperal state, rather than on that state itself, was disproved by the fact that in cases where no antiseptics had been used similar modifications had been proved to exist. The modification, not absence, of individual symptoms did not amount to masking. Eliminating septicæmia, the influence in the puerperal state which really might mask the symptoms, it might be concluded that scarlatina, whether masked or not, bred true, and did not produce septicæmia. As to prophylaxis, it was wrong to suppose that cleansing the hands was the one essential precaution, for the genital tract did not hold a monopoly for the ingress of scarlatinal poison. Though the precautions recommended in the paper were open to criticism on the score of idealism, they were such as Dr. Boxall had consistently carried out in practice, and, though fully aware that their complete adoption in every case was impracticable, they had been put forward by him as embodying the correct principles of treatment. He had omitted from his paper the bacterial question, for the germs themselves were, so to speak, on probation, and the exact relation of different organisms to scarlatina and to septic diseases was not very precisely determined.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

AN ordinary meeting was held on Feb. 3rd, the President, Mr. Edward Atkinson, in the chair.

Mr. M'GILL related a case of Intestinal Obstruction due to a Meckel's Diverticulum successfully treated by laparotomy.

Ilio-cæcal Growth; Obstruction; Enterotomy; Recovery.—Mr. JESSOP related a case of this kind. The patient, a man aged thirty-three, was admitted to the Leeds Infirmary with abdominal pain of nine weeks' gradual onset. He had been unable to work a fortnight after, and after twenty-four days he had symptoms of complete obstruction, with stercoraceous vomiting lasting seventeen days. Then diarrhœa supervened, and there had been no vomiting for eight days before admission. He was then very ill and wasted; the abdomen was much distended with constant borborygmi, there being visible peristalsis. Nothing abnormal could be felt. Two enemata of sixty-four ounces were retained a short time, returning slightly stained with fæces. On Dec. 1st, on the abdomen being opened, a hard fixed irregular mass was felt at the junction of the ileum and cæcum. The small intestines were much distended and hypertrophied. An incision was made a few inches above the obstruction, and the intestines, which had been turned out to facilitate examination, returned after they had been emptied by passing through the fingers. The patient made a good recovery.—Mr. PRIDGIN TEALE related the case of a man who, after a hearty supper on Dec. 24th, was attacked by vomiting, colic, and obstruction of the bowels. On Dec. 27th the vomiting had subsided, and no operation was attempted. Vomiting supervened on the 28th, and on the 29th, the abdomen being opened, a coil of gut was found to be bound down by a slender though firm band, from the cut ends of which when divided a thin fluid exuded of fæcal odour. Upon irrigating the peritoneum, a clubbed diverticulum was washed up out of the pelvis, where apparently the free end had been impacted and had so given rise to symptoms of obstruction. The patient died immediately after the operation.

Mr. E. ATKINSON introduced to the notice of the Society the case of a Rupture of the Intestine—a porter, aged twenty-eight, who was admitted to the Leeds Infirmary at 2 P.M. on Aug. 15th, 1887, having received a severe contusion from falling against the edge of a table shortly before. On admission he was collapsed, with thoracic breathing, but resonant in the flanks, and clear urine was drawn off. He vomited some undigested food, mixed with blood. The abdominal pain increased, distention supervened, and at 10 P.M. abdominal incision showed early peritonitis, with flakes of lymph, and a perforation about half an inch long, close to the duodenum, with great bruising of the bowel. The wound was closed by six Lembert's sutures of chromic gut, the peritoneal cavity irrigated with a 2 per cent. solution of boric acid, at a temperature of 96° F. A Bantock's tube was placed into the recto-vesical pouch, and the abdominal cavity closed. The next day he was worse, with hiccough, tympanites, and complete obstruction. On the 15th the peritoneal cavity was again opened and irrigated, but no fæcal extravasation was found. The patient died four hours after.

Acute Dilatation of the Stomach; Laparotomy.—Mr. JESSOP related the case of a lady, aged twenty-six, who was recovering satisfactorily from an excision of the hip, performed a month before for old disease of traumatic origin (probably not tuberculous). The wound had nearly closed, and she was doing well, when, in the absence of the nurse, she obtained and ate an apple. Severe vomiting followed. An aperient was given and milk diet enforced. For two days the vomiting was intermittent and there was severe thirst. On the third day the outline of the stomach could be clearly seen, much distended in the tumid abdomen before vomiting, but it was collapsed afterwards. There was no tumour to be felt, and no tenderness, but the patient rapidly sank. On the fourth day, as a last resource, the abdominal cavity was explored, when the stomach, duodenum, and the first six inches of the jejunum were found enormously distended, the rest of the bowels being collapsed and small. The patient died a few hours afterwards. At the necropsy nothing was detected but extreme dilatation, as described above, passing abruptly to a condition of extreme contraction at a point six inches below the duodenum.—Dr. CLIFFORD ALLBUTT said it was difficult to account for acute dilatation of the stomach, except on the theory of neuro-paresis in patients of feeble constitution, or weakened by long illness, in whom an acute condition has supervened.—Mr. TEALE said in his experience one-third of the cases of intestinal obstruction got well without operation, and that this consideration accounted for the delays which so often rendered operation useless. He had never seen a life thrown away by operation, but could call to mind four cases where death had followed on an operation deferred too long. There were grave dangers from the damage done to the bowel by the great distension, and he had seen one case of ilio-cæcal rupture where the patient had been watched for four weeks before a malignant stricture was discovered high up the rectum.—Dr. JACOB thought acute dilatation of the stomach might be caused by the mechanical hyper-distention of the organ by gas evolved during imperfect digestion, the coats of the alimentary tubes being in an atrophic condition from partial disuse in a patient unable to take but a small amount of food, or weakened by long illness.—Mr. JESSOP spoke of the advantages in all cases where there was danger of asphyxia from hæmorrhage or vomiting of operating with the head depressed over the edge of the table, so that the upper part of the pharynx became the most dependent.

At the meeting on Feb. 17th Dr. Spottiswoode Cameron, Vice-President, occupied the chair.

Incision of the Cyst in Hydatid Disease of Liver.—Mr. MAYO ROBSON described the case of a patient admitted to the Leeds Infirmary, under the care of Dr. Churton, with a history of a swelling in the abdomen of fourteen days' duration, and of pain for the previous five days. On admission, he complained of pain in the abdomen, where a tumour, yielding an impulse on percussion, was detected; temperature 101°. His state seemed so urgent that operation was determined on. The cyst was exposed by an incision outside the rectus muscle, and through a large ovarian trocar, put into the cyst through a small incision, a multitude of small cysts escaped, the whole contents measuring 120 ounces. The edges of the sac were stitched to the wound, and the cyst irrigated and drained. The patient made a good recovery, though the very copious discharge became purulent before ceasing.—Dr. EDDISON thought it was very important to know if secondary cysts existed, as if not,

recovery would follow tapping. Even if the daughter cysts were killed by puncture, they would remain as foreign bodies.—Dr. MAJOR thought the symptoms of hydatid fremitus rare and fallacious.—Mr. MAYO thought there was danger of the escape of fluid after simple tapping.—Dr. GRIFFITH had seen many cysts aspirated, but even when the fluid was very thin there had been no extravasation. He had seen two cases only of suppuration after tapping.—Mr. M'GILL advocated tapping as easy and safe. He had tapped one cyst six times; the severer operation could be done afterwards, if necessary. In doing the operation described by Mr. Robson he would prefer stitching up the peritoneum before opening the cyst.—Mr. MAYO ROBSON, in reply, said he would always tap in non-urgent cases. He had seen serious symptoms from drawing off small quantities of fluid.

The Treatment of Empyema of the Maxillary Sinus.—Dr. ADOLF BRONNER described this condition as liable to be produced by disease either of the teeth or nose, but in most cases he thought it was secondary to a condition of hypertrophic rhinitis, and the disease of the teeth was secondary to this. The principal symptoms were an aching pain in the nose and cheek on one side, with an offensive discharge from the nose, increased on hanging the head down. In all cases of one-sided recurrent chronic rhinitis this condition should be suspected. He discussed the advantages of opening the cavity from the nose and from the mouth, and preferred the method of opening it from the middle meatus of the nose by means of instruments devised for the purpose by Dr. Hartmann of Berlin and Dr. Krause (which he exhibited). The usual plan of perforating through the alveolar process had the advantage of allowing good drainage, but there was a constant dropping of pus into the mouth, and food penetrated from the mouth into the cavity. He described four cases in which the antrum was opened from the nose and washed out with boric acid or mercuric chlorate solution. In one case the sense of smell returned, which had been lost for sixteen years.—Mr. TEALE said he had been treating chronic diseases of the mucous membrane of the nose by more vigorous measures then he used to adopt—viz., forcible scraping.—Mr. JESSOP thought many cases of ozæna were very difficult to treat. He had been using the curette much of late, operating with the head of the patient hanging down. He referred to a case of lupus, in which he had scraped a large amount of periosteum from the hard palate, but there had been a complete covering to the bone reproduced, and, he said, a similar condition might take place in the nose after forcible abrasion.—Dr. ERNEST JACOB spoke of the advantages of examination of the nose by a very strong light, such as the oxyhydrogen, before and while operating. He preferred the galvano-cautery to the curette in hypertrophic conditions of mucous membrane.

The Prevention of Ophthalmia Neonatorum.—Dr. BELL after reminding the Society that 72 per cent. of the blind in England were so from this perfectly preventable condition, and that there were 10,000 persons in England blind, urged the Society to make some organised attempt to stay the spread of this disease. Something might be done by the instruction and greater supervision of midwives; something also by the instruction of the people generally in the danger of neglecting the early symptoms in the children. A petition from the Ophthalmological Society to the Government—that the registrars of births might disseminate the necessary information—had been refused on the score of the expense which would be incurred; but this was much overrated. The committee of the Bradford Eye and Ear Hospital supplied the registrar of births with slips of paper, on which were printed plain directions, which he gave to each person registering a birth, and the total cost for the Bradford district did not exceed 25*s.* At this rate it would cost but £30 for the whole of England.—Mr. MAYO ROBSON thought the poisonous character of most antiseptics prevented their general use in midwifery. Many cases of poisoning by mercuric chloride so used had been reported. He had had good results in surgical cases from sodium fluosilicate—commercially known as "salufer,"—which was by no means poisonous.

ANGLO-DANISH EXHIBITION.—His Royal Highness the Duke of Cambridge will preside at the festival dinner in aid of the building fund of the British Home for Incurables, which will be held in the conservatory of the Royal Horticultural Gardens on May 14th.

REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS.

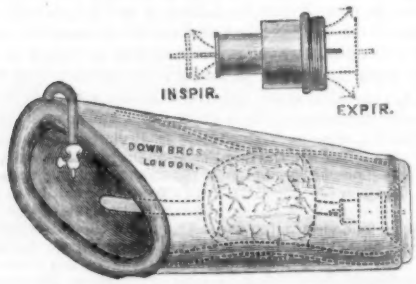
THE report of Mr. Alexander Redgrave, C.B., H.M. Chief Inspector of Factories and Workshops, for the year ended Oct. 31st, 1887, has just been issued. As usual in these reports, the one before us contains an immense amount of information as to the social and moral condition of the class of workers and the rate of pay gained by the toilers in our chief industrial centres. One of the most interesting reports in the present volume is that by Mr. Lakeman on the earnings and social condition of female operatives in the central metropolitan district, including the sweaters' trade—a subject which has of late (mainly owing to the investigations and disclosures of THE LANCET) occupied a considerable amount of public attention. Mr. Lakeman's report merely recapitulates the old story—viz., that overwork is ventured on, and that the workshops are overcrowded, ill-ventilated, excessively hot, and filthy withal. Those most interested in this wretched industry look to the law as the effective source of remedy, and naturally so, when so many evidences of the effects of violations have been reported by the press; but in a majority of these sweaters' dens the factory inspector is powerless. The sweater, however, is, according to Mr. Lakeman, as big a slave as his helpers, for the Jewish merchants are not in complete sympathy with Jewish sweaters; the capital in money seems to war with the capital in labour; the maxim that "all Israel are brothers" is not adhered to in the sweating trade, but rather the Ishmael life is exemplified and intensified by immigration, whence fresh sources of discontent are sprung, prices are kept down, the middle-man is as potent as ever, the sweater as powerless, and the merchant, smiling through all, gazes upon his enormous stock ready for shipment and home distribution. Space forbids further analysis of this tale of misery, but we recommend a perusal of the full report to all who feel interest in the lives of their poorer brothers and sisters engaged in the tailoring trade in the East-end. With reference to the employment of children, Mr. Meade-King, H.M. Inspector for Manchester, Warrington, Northwich, &c., reports that he observes "with regret" a very marked decrease. Whereas there were about 3000 children employed when he went to the district, there are now scarcely 300. School authorities were in some cases so averse to "half-timers" that they exacted higher school fees from them than from "full-timers." Again, the section of the Factory and Workshop Act, 1878, which prohibited children from cleaning machinery in motion, dealt another severe blow to their employment. These and other causes seem to point to a speedy termination of half-time employment of children, in Mr. Meade-King's district at least. In the textile district, too, of which Bolton is the centre, Mr. Brewer, H.M. Inspector, reports a considerable decrease of "half-timers" employed in mills and factories. In Birmingham, also, the employment of "half-time" children has practically ceased in all businesses, except in some branches of the button trade, where female children are still employed to a limited extent. Under the Factory and Workshop Act there are now thirty-nine districts, over which there is an inspector resident in the part most convenient for the performance of his duties, and in addition ten junior inspectors are employed, and act under the instructions of the inspectors of districts which are the most closely filled with factories and workshops. It is pleasing to note that the majority of these gentlemen in their report record what appears to them to be a distinct revival in the various trades over which they exercise supervision. The only accidents which are to be reported by certifying factory surgeons are—(*a*) any accident which causes loss of life to any person employed in a factory or workshop; and (*b*) any accident which causes bodily injury to a person employed in a factory, and is produced either by machinery moved by steam, water, or other mechanical power, or in a factory or workshop caused through a vat, pan, or other structure filled with hot liquid or molten metal, or other substance, or by explosion, or by escape of gas, steam, or metal, and is of such a nature as to prevent the person

injured by it from returning to his work in the factory or workshop within forty-eight hours after the occurrence of the accident. Of such accidents there were reported during the year covered by this latest report a total of 6827, of which 5496 happened to male workers, and 1331 to women and girls. The total number of informations laid for breaches of the Act was 2777, which resulted in 2141 convictions, the dismissal of 76 cases, and the withdrawal of 560 on payment of costs. These figures are strong testimony as to the thoroughness of the work done by various inspectors throughout the United Kingdom, and Mr. Redgrave is to be congratulated on the practical value of his last report.

New Inventions.

ETHER MIXTURES INHALER.

I AM guilty of adding one more inhaler to those in use for the administration of ether and its *confrères* in our list of narcosis producers. It is simple and clean both to the administrator and patient. On removal of the coarse sponge, which is saturated with the compound when in use, there is no part of the inhaler which is liable to retain the odour of the ether. The only novelty is the double-acting valve,

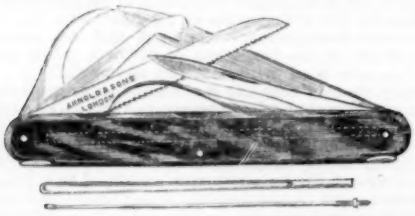


which the instrument makers (Messrs. Down) have registered—on my making them a present of it,—and the position thereof, to be out of harm's way, under the observation of the administrator, and constructed to carry the air admitted through the ether. I think practitioners who do not administer often, want to save their pockets, not savour of ether, and keep their patients unfrightened with display of apparatus, will like it.

TOM BIRD,
Instructor in the Use of Anæsthetics, Guy's Hospital.
Brook-street, W., Feb. 8th, 1888.

THE PRACTITIONER'S KNIFE.

I BEG to call the attention of the profession to the great utility of a new knife, made by Messrs. Arnold and Sons, West Smithfield, London. It consists of a tortoise-shell handle, in which are set six different instruments, three of

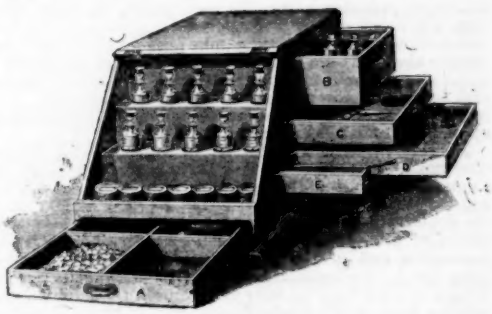


which arise from each end of it. The instruments are: 1. A finger knife. 2. A finger saw. 3. Symes' abscess knife. 4. A gum lancet. 5. A tenotomy knife. 6. A sharp-pointed, curved needle. Besides these, however, there is a groove, cut out of the under surface of the tortoise-shell itself, at each side of the handle, which holds a probe and director respectively; and these two latter are so arranged as to permit of being screwed together so as to form one piece. The convenience and utility of such a combination will be apparent to anyone on a moment's consideration. It not only does away with the necessity of carrying in one's pocket so many different instruments elaborately arranged in a bulky pocket-case, but it also enables the general practitioner—armed with this instrument, an artery forceps and a clinical thermometer,—to cope almost with any case he is likely to come in contact with, either on sudden emergencies or in his daily rounds. Further, its neatness, its convenient size—being no larger than an ordinary pocket-knife,—and its compactness and cheapness, all tend to render it of special value to those whose practice lies in the country. To infirmary students, also this knife would prove a great boon.

J. DODD, M.B., C.M., Burnley.

OPHTHALMIC CABINET.

THE accompanying illustration represents an ophthalmic cabinet which I have devised for my own use, and which I find extremely convenient. There are ten drop-bottles for the following solutions: Strong nitrate of silver, weak nitrate of silver, chloride of zinc, sulphate of copper, perchloride of mercury, atropine, homatropine, cocaine, hyoscyamine, and eserine. Also seven glass pots for the following ointments: atropine, atropine with cocaine, cocaine, strong yellow oxide of mercury, weak yellow oxide of mercury, yellow oxide of mercury with atropine, and iodoform. The drawer A is for cotton wool, boracic lint eye-pads, adhesive plaster, needles, sutures &c. Drawer B is for the reception of a series of bottles containing "stock" in a concentrated form for replenishing the solutions in the drop-bottles when these are exhausted. Drawer C is for such



small instruments as ophthalmoscope, scissors, probes, &c. Drawer D is for bandages; drawer E is for brushes. The lid, which falls over the tiers, is made of such a size as exactly to fold back on to the top of the cabinet when opened. I understand that it is the intention of Messrs. Burroughs and Wellcome, of Holborn Viaduct, the makers of my cabinet, to fill the "stock bottles" in future with tabloids (the base of which will probably be boric acid). Each tabloid will contain a stated quantity of active agent, and it will then only be necessary to dissolve one or more tabloids in distilled water (according to strength required) in order to form the solutions for the drop-bottles. This plan possesses an obvious advantage, inasmuch as the tabloids will preserve the active agents for any length of time. The cabinets are in two sizes: one large, for hospital out-patient rooms; the other smaller, for private use

A. ST. CLAIR BUXTON,
Assistant Surgeon to the Western Ophthalmic Hospital.

THE LANCET.

LONDON: SATURDAY, APRIL 14, 1888.

WHILE the Local Government Bill deserves approval in very many respects, it must be admitted that it fails to promise any useful influence upon public health administration in England and Wales. This, indeed, does not appear to have been its object, for with the exception of creating fifty-two local government boards in place of one, the health service is untouched. Medical officers of health will serve the same authorities as at present, they will be subject to the same difficulties, and the improvement of sanitary districts will not take place more rapidly.

It is well before the Bill becomes law to consider briefly the manner in which health services are rendered at the present time. In large towns and in combined districts able and skilled officers advise authorities, and the administration of these areas compares very favourably with that in the small rural districts, where the appointment of practitioners for a nominal sum enable boards to claim that they have complied with the Act of Parliament requiring them to appoint a medical officer of health. In these districts often no administration worth the name exists, and the officer derives no satisfaction from the feeling that he is acting a useful part in life. Many would, indeed, be glad to be quit of their appointments, as their duties cause friction between themselves and their patients, and the very fact that they are themselves engaged in practice interferes with their receiving from brother practitioners the information they should have.

The chief advisers of sanitary authorities ought not to be engaged in general practice, but should devote their time to their public health duties, and should therefore be remunerated with sufficient liberality to enable them to do so. They should, moreover, be free from risk of loss of office if, in their endeavours to promote the welfare of districts committed to their charge, they should offend the susceptibilities of the members of their boards. The Bill, unfortunately, gives no assistance in the direction required to place the medical officer of health in a position of greater independence, and therefore of greater usefulness; and if it become law as it now stands we do not hesitate to predict that the service will deteriorate.

By creating County Councils and conferring upon them the more immediate administrative functions of the Local Government Board, a superior sanitary authority is brought into existence for each county, and this council is in a sense responsible for the proper performance of the public health duties of the District Councils. To transfer to the County Council the appointment of medical officers of health is the change which is urgently needed in the public interest; each County Council must, if it do its duty, have intimate knowledge of the sanitary condition of the area over which it has control, and must necessarily employ officers for this purpose. That they should receive this information direct from the medical officers of health would therefore be an economic arrangement. Certainly, in all counties the central Council must have skilled aid to guide it in the performance of its duties, and this officer should be in intimate relation with those engaged in the different sanitary areas; this would be most conveniently effected if the local medical officers of health were in the service of the same board. The officers thus appointed would occupy a position of independence in advising the District Councils, and this position experience has shown to be sadly wanted. The division of the county into convenient areas for the various medical officers of health would probably enable each health officer appointed to receive an adequate salary without any greater increase in the expenditure of public moneys than at present, and a service thus constituted would draw to itself men more highly trained for this special work.

We believe that the modification of the Bill which we propose would not only be of material benefit to the public, but would be very acceptable to those now engaged in the public health service. There is no class of men to whom the public is more indebted for the performance of important duties under circumstances of enormous difficulty than medical officers of health, and in claiming that their interests shall not be lost sight of at a time when the internal administration of the country is being reconstructed, we are convinced that we shall have the support of the whole profession.

It is probable that in the future the duties of medical officer of health will require modification, but we have no desire to see him compelled to accept the office of public analyst. There is no doubt that in many districts the two duties are well performed by one individual, but the health officer of the future should find such ample occupation in the investigation of circumstances affecting life and health as to free him from any requirement to spend his time in purely chemical work.

We are glad that there is still time for the consideration of the proper position of the medical officer of health before the Local Government Bill finally become law. There ought to be no difficulty in placing him where his services can be most usefully employed, and where at the same time he shall be freed from the difficulties which now surround him. Public health administration has existed in this country for a time sufficiently long to afford abundant experience for guidance as to the future. The Cabinet have at their disposal advice in which the profession generally, and health officers in particular, have the fullest confidence; it will be matter for serious regret if the present opportunity is lost for placing on a better footing the sanitary service.

IT is, in our judgment, very necessary that the medical profession should clearly realise the movement now going on in the nursing world. As our readers have noticed, we have chronicled with great care the rise and progress of the British Nurses' Association. We have been much surprised to find that many medical men are not fully aware of the significance of this new body, and, as we believe that its future action is of considerable importance to them, we would direct the attention of our readers to the present position of the movement.

All who are connected in any way, either as physicians and surgeons to large hospitals, or as employers of skilled nursing in private practice, must have been impressed by two striking facts which have arisen within the last ten years

The first of these is that, from social or economic causes, large numbers of highly educated gentlewomen of the upper and upper middle classes have adopted the nursing of the sick as a definite calling, instead of remaining at home more or less unemployed, or, if obliged to earn a livelihood, instead of entering some such uncongenial life as that of a governess. The natural consequence has been that the social status of nurses collectively has been immensely raised, and their individual influence much increased. Many, we are aware, urge that ladies ought not to be allowed to become trained nurses. We certainly think that it is advantageous for the medical man to have an educated gentlewoman to carry out the important duties of a nurse. She will carry out his instructions well because intelligently; she will not arrogate to herself undue importance, because her social position cannot be disputed; she will not trust her own judgment against the doctor's, because her very education has shown her how dangerous a thing is the little knowledge which she can realise is all that she has gained.

Now the second fact arises from the first. Educated gentlewomen, having become nurses, naturally enough saw and introduced methods and ways of tending the sick which had never occurred to uneducated minds, and have raised nursing to the position of a skilled calling, and advanced its progress with giant strides. For we have no hesitation in saying that the diminishing mortality from typhoid and from infectious fevers, after abdominal and other capital operations, as well as from pneumonia and other acute illnesses, is largely due to improved nursing as well as to increase of medical knowledge and surgical skill. But with this great advance in the scientific progress of nursing and in the social position of nurses has come the desire on their part for some recognised legal status. And here history is not wanting in precedents. The physicians in the sixteenth, the surgeons in the eighteenth, the apothecaries and the dentists in the nineteenth century, found themselves practising what in each case was a distinct profession, and each agitated for and received legal recognition and rights. Each obtained for their own and the public good the power to define clearly the qualified and the unqualified or quack members of their profession. So it appears that the nurses, finding themselves trained to a high standard of skilled knowledge, have had a growing desire to be united as a professional body, and to obtain a similar legal power. Events have suddenly forced the question to the front. Six months ago a small association, consisting chiefly of philanthropists interested in hospitals, issued a circular to nurses, offering to register them after one year's training. Had nurses been organised by an association unrecognised and uncontrolled by the medical profession, and not responsible for its acts to the public, to doctors, or to anybody else, what must inevitably have happened? Divided authority, and the disastrous results which follow when a house is divided against itself. We foresaw this danger, and, as our readers know, we gave all the publicity possible to the efforts made to avert it. Those efforts have been successful, and we congratulate the founders of the British Nurses' Association warmly on that success. We consider, moreover, that they deserve and should receive the thanks of the whole medical profession for the stand they have taken in maintaining the undoubted right of medical men to control the nurses of the future. We repeat that the medical profession might have irretrievably lost that control. But the danger has been averted. Nurses are now being united by an association, the management of which, as we have previously pointed out, is largely in the hands of doctors, and the first work the British Nurses' Association proposes to undertake requires all the assistance and advice which the profession can give.

There is no doubt that the question of the registration of nurses is now in the region of practical politics. The more the public demands skilled nursing when in sickness, the more keenly will it insist upon having the real and not a spurious article, and the more necessary therefore will it become to provide it with some definite means of knowing with absolute certainty who is and who is not a trained nurse. In the medical and other professions a legal register provides that means. The advantage of having such a register of trained nurses, therefore, not only to the public but also to medical men and nurses themselves, would be incalculable. The British Nurses' Association proposes, therefore, as its first object to obtain a Royal Charter authorising the formation of such a register. It is, perhaps, hardly necessary to educated readers to point out that unless such register be authorised by the State it is of no value whatever. But with reference to the system of registration, there are several points which occur to us, and upon which we would gladly elicit the opinions of our readers. In the first place, what body is to undertake the multifarious details of the work? Possibly it would simplify matters very considerably if the Royal Charter which legalises this registration created a General Nursing Council or some such body to carry it into effect; it is certainly all-important that the body entrusted with the registration of nurses for the United Kingdom should be powerful, independent, and impartial beyond criticism. In the next place, what test should be imposed as to training and knowledge upon any nurse before her name is placed upon the register? If it is to be a guarantee to the public and to the medical profession that no one who is unfit or untrained appears thereon, it is absolutely essential that this register shall be jealously surrounded by efficient safeguards. We fully realise the many and great difficulties in the way, but we would impress upon our readers our earnest conviction that these difficulties must be met and overcome. There is little doubt that nurses will get their registration, whatever opposition may be raised against the idea. Many clear-headed and far-sighted members of our profession see this, and have given their cordial support to a movement which, carefully directed, must command success.

IN his recent Presidential Address to the Chemical Society of London, Mr. CROOKES extended considerably the remarkable speculation on the genesis of the chemical elements which he advanced at the Birmingham meeting of the British Association in 1886. The hypothesis supposes the pre-existence of a primordial matter, to which the name of *protyle*, originally used by ROGER BACON, is conveniently assigned. This protyle, "fire-mist" or "ur-stoff," is imagined as "an infinite number of infinitely small ultimate, or rather ultimatissimate particles gradually

accreting out of 'formless stuff,' and moving with inconceivable velocity in all directions." These particles begin "to heap themselves together by virtue of that ill-understood tendency through which like and like come together." Hence arise "nodal points in space between which occur approximately void intervals." At these points the so-called elementary atoms form as clusters of protyle particles. They are formed in regular sequence, the recurrence of similar conditions in the octave cycles indicated by the periodic law forming similar but progressively heavier atoms. Thus, the seventh element from lithium is sodium, and the seventh from sodium, potassium; the atomic weight of sodium being the exact mean of the other two. In the earlier of his addresses Mr. CROOKES symbolised the rhythmic changes by which the atoms may have been formed by a zigzag curve representing the motions of a pendulum which is slowly sinking downwards, while its oscillations are diminishing in amplitude. The downward fall denoted a lowering of temperature; the diminution of lateral swing, the action of some other influence—perhaps electricity. This illustration had the disadvantage of dealing with two dimensions only, and it is now superseded by a model shown for the first time to the Fellows of the Chemical Society, in which the pendulum is represented as swinging in the form of a figure of 8, but with a constant fall. On the wire which represents this double spiral, balls representing the atoms are placed at equal distances in the order of their atomic weights, and a glance then shows how, and suggests a reason why, they conform to the great periodic law. A more beautiful and instructive illustration of a scientific theory was never devised. Of course such models and diagrams must not be taken too literally. The periodic law itself, the first recognition of which we owe to the genius of NEWLANDS, rests, indeed, on the firmest basis of fact, although its full scope is as yet unknown; but the splendid hypothesis of CROOKES, dealing with problems on the uttermost confines of our knowledge, is only offered as a ray of light thrown into dark and unknown regions of time and space. That it will guide the way to new discoveries is certain; that it is altogether illusory seems impossible; but that it is sufficient and in all respects satisfactory, no one, and least of all its author, can suppose.

The ideas prevailing in the CROOKES hypothesis are, then, first, a protyle; secondly, fall in temperature, or some loss of motion equivalent to it; and thirdly, some other kind of motion conceivably in more than one direction, symbolised by the lateral figure-of-8-like swing. With regard to the protyle, Mr. CROOKES seems for once to have discarded his usual caution. It is surely unnecessary to speak of the protyle particles as "infinitely" small, or as "ultimate.' Perhaps this is hypercriticism, and that for "infinitely" we may fairly read "immeasurably." But the connotation of the two words is very different. Great and small as applied to space and time are relative terms, and have no meaning at all in relation to the infinite. If in process of time the protyle particle became known to us as molecules and masses are now, we might still suppose that it was a world, a solar system, or a universe compared with particles still smaller. The smallest mass is infinitely greater than the infinitely small. The mode in which atoms may arise at periodical intervals from protyle was illustrated by Mr. CROOKES by the singular but remarkably apt example of men walking in Fleet-street! One or two men moving more slowly than the rest will cause a small knot or cluster, while those in front walking on will leave an almost empty space—a partial vacuum. So with mineral particles of different density in flowing water, and so with electric discharges in rarefied air.

We must now consider the most striking novelty in this remarkable train of speculative reasoning. Many elements are distinguished from one another by sharp points of difference; but, on the other hand, some—and the number is constantly increasing—are so very like one another in atomic weight and other chemical and physical properties that their separation and identification are of the utmost possible difficulty. These elements appear in the periodic classification as groups where a single element might be expected. Mr. CROOKES adduced many examples, drawn partly from his own laborious researches, in which it is hardly possible to say whether two substances are the same or different elements. Such bodies he classes as "meta-elements," and he shows that the new hypothesis is quite capable of accounting for their existence. Space forbids us to follow the argument. We must content ourselves with saying that it rests in great measure on the probability, to which all our knowledge of nature seems to point, that the atoms of an element are not exactly, but only approximately, equal in size; or, in other words, that the atomic weight is the mean, and not the absolute, weight of the single atoms. This hypothesis, although opposed by CLERK-MAXWELL, is reasonable, and it accounts for much that is otherwise obscure. By its aid we can understand why the atomic weights seem always to approach towards, but never exactly to conform to, the whole numbers required by PROUT'S long-contested law—why by the patient fractionations of modern chemistry we can, so to speak, sift the atoms of an element, and so obtain different although nearly identical substances from it, and why in the classification derived from the periodic law we sometimes find near the neutral line in the great rhythmic vibration a nebula instead of a single star.

We have necessarily omitted much that is of the highest interest, and recommend our readers to study for themselves this great vision of primæval history.

WE from time to time offer our readers a few reflections on the numbers of the profession and of those also who aspire to enter it. We have pointed out, for the benefit of all whom it may concern, that the profession of late years has been increasing at a serious rate, while the health of the public has been increasing too, or, at any rate, while its mortality has been diminishing. It is a very creditable thing that as Medicine grows more perfect, and the profession itself increases in numbers, the health of the public grows *pari passu*. It is another question whether Medicine becomes more profitable as a calling. Judging from the tone of the reports and the complaints which reach us from all parts, medical work is not lucrative. Much of it, indeed, is depressingly unremunerative. This is not, however, our business just now. Our intention is to look at the Registers of medical practitioners on the one hand and of medical students on the other, and to see whether there is any

abatement in the rush into the profession which we have noticed of late years. Our readers know that medical students have to be registered. We have accurate data as to the number of such registrations for twenty years back. In the ten years from 1868 to 1877 there were 12,872 students registered as commencing their medical education, giving an annual average number of 1287. In the ten years from 1878 to 1887 there were 19,278, or an average annual number of 1927. In other words, there have been 640 more new students per year in the latter period than in the former. In 1887 the new entries to the medical schools in London and the provinces were 907, exceeding the entries of 1886 by 74. This does not look very much as if there was any serious halt in the rush. There are, however, perhaps some slight indications of a pause. There were 1899 students registered in the Students' Register last year, against 1908 the year before; and if we divide the last ten years into two equal periods, we find that there were 9847 students registered in the first half, as against 9431 in the latter. In other words, there were 416 less in the later period than in the earlier. Our readers may have noticed that our Edinburgh correspondent reported last week a considerable falling off this year as compared with former numbers in the entries on the medical side of the University for the preliminary examination in general education. We do not attempt to explain the fact or assign its significance, but it may be noted here for what it is worth.

So much for medical students. We now come to a few facts concerning the great roll of the practitioners who constitute the medical profession as given in the Medical Register. The Register for 1887 contains the names of 27,246 practitioners, as against 26,452 in the previous year—an increase of 794. One year does not show very much. The numbers are liable to sudden fluctuations from accidental causes. An exceptional shower of inquiring letters under Clause XIV. may descend and clear the Register of hundreds of names of those who are too careless to notify changes of address, and so reduce the total number in the Register for the year. In other years an exceptional effort to ascertain every death had swollen the apparent mortality of those years. In 1886, under Clause XIV., which empowers the Registrar to remove those who do not respond to letters inquiring their address, no less than 448 were removed. Only 85 were restored under this clause. In 1887, 320 were removed, and 115 were replaced. So that in 1886 there was a balance of removals under this clause of 363, in 1887 of only 205. Besides this, there were in 1887 exactly 100 more new names added to the Register than in 1886: 1531 as against 1431. This is the largest number of new registrations in any year. They are divided thus: registered in England 792, in Scotland 378, in Ireland 255. In no previous year have the registered numbers of the profession been so high as in this—viz., 27,246. This, perhaps, does not count, as we have shown, for very much. But what is more serious is the great disproportion which we have often noticed between the numbers added by new registration to the profession and those removed in the natural course of things by death. Great care is now taken by the Registrar, Mr. MILLER, to have the death of every practitioner ascertained. But, even so, the average annual removals on evidence of death do not exceed 583. Last year they were only 521, yet the new registrations were 1531. Here is the rush into the profession. It may well be imagined that even Mr. MILLER has not received notice of all the deaths in 1887. It is scarcely likely that there should have been sixty-two deaths below the average of medical men in the year, but a few more would not alter the rough fact that there are still three rushing into the profession to fill the place of one.

THE question of notification of disease is becoming an urgent one. It is one rather of local or municipal urgency than of Imperial politics, and yet it is clearly one that ought to be dealt with on broad general principles, rather than in a furtive sort of way in local Bills. There are some fifty towns in England, which have local powers for the notification of infectious disease. In the metropolis, and in the majority of other towns, the fact of the existence of such disease may be suppressed with impunity till the spread of it is notorious and altogether uncontrollable. It may be assumed that what has been done by these fifty towns will ere long be done for all towns, and not for towns alone, but for villages and rural districts. Many reasons for this assumption exist. The signal instances in which infectious disease is introduced by palpable carelessness, and spread by equally palpable indifference, have produced a great impression in different parts of the country. Sanitary authorities have not always been innocent of this indifference, but hitherto they have had the excuse of not being supplied with reliable knowledge and with necessary powers to deal effectually with early cases. On the other hand, the signal success with which some local authorities cope with infectious diseases by a system of notification has produced a marked effect. In Leicester, for example, the system of effective notification is only second to vaccination and revaccination in keeping small-pox outbreaks under. There is another reason for believing that a severe system of notification will become general by early legislation. Most districts are having all the cost of providing hospitals for isolation, and thousands of people who are not paupers are taking advantage of such hospitals and escaping all the medical and nursing and other expenses of infectious diseases. If the public is to be thus saddled with the cost of infectious disease, it follows as a corollary that it must have more control over the beginnings of epidemics. We shall soon have a fine bill in London to pay for our epidemic of scarlet fever, which has included thousands of cases in the comparatively comfortable classes, which might and should have been prevented. When this bill is presented it will operate as a powerful stimulus to the demand for powers in every sanitary district to deal promptly and effectually with all cases, and especially with early ones. It is, indeed, apparent that on becoming the subject of an infectious disease questions of personal freedom sink into abeyance. The most virulent anti-vaccinators become sternly despotic, and insist that if persons have a right to have small-pox—which we deny—society has the right to shut them and all belonging to them up and incarcerate them for an indefinite period. The rights of society are greater than those of any of its members. There is at present before the House of Commons a Bill to secure notification and other powers, with the names of Mr. HASTINGS, Dr. FARQUHARSON, Mr.

FRANCIS POWELL, Mr. WHARTON, and Mr. HARDCASTLE on the back of it. This Bill provides for the notification of certain specified infectious diseases, and gives power to the Local Government Board to include others from time to time. The notification is to be both by the occupier and by the medical man, or in certain circumstances (which we do not quite understand) by the patient himself. It provides also for requiring cowkeepers, laundresses, and others to give lists of customers, to submit to disinfective measures, to stop their business &c. It also provides for the limitation of the time of deferring funerals, and of the time and manner of the removal of corpses &c. These may seem to some minds gross interferences with personal liberty, but they are not so shocking as the suppression, in the name of freedom, of the fact of dealing in infected articles and sending death into unsuspecting families with the milk and so-called clean linen. The debatable question in this Bill is that of requiring the medical man to certify. Two lawsuits on this question are before us—one at Jarrow, and the other at Croydon. In the former the charge was dismissed; in the other Dr. DALTON was fined £1 and 1s. costs, though he had caused the householder to notify as soon as he knew of the disease. Dr. CARPENTER of Croydon last week wrote a letter strongly stating the objections to the medical man being charged with a duty clearly binding on the householder. We commend this letter to the consideration of Dr. FARQUHARSON and the promoters of the Bill. With a modification in this particular the Bill would be welcomed and supported by the profession.

Annotations.

"Ne quid nimis."

THE SCOTTISH UNIVERSITIES BILL.

ONE of the most difficult matters which the Government has to deal with is the demand for some change in the constitution of the Scottish Universities. The demand proceeds mainly from the University Councils, which are made up of graduates of all the faculties. Their complaint is that the government of the Universities is too exclusively placed in the power of the Senatus, or body of the professors. It is quite true that the University Court, even now, has powers over the Senatus. It can review its decisions, and is a Court of Appeal. It can require due attention on the part of the professors to the regulations as to modes of teaching. It can fix and regulate fees in the several classes from time to time. Upon sufficient cause shown, it can censure professors or suspend them from office, subject to the approval of the Privy Council. Finally, it has power to inquire into and control the administration by the Senatus Academicus, of the revenue expenditure, and all the pecuniary concerns of the University, including funds mortified for bursaries and other purposes. These are large powers, but virtually they have never been used, and the Court has done little more than second the proposals of the Senatus, which in the case of the Edinburgh University has had the practical administration of a capital sum of £370,000, or an annual sum of £36,250, apart from class fees, which are no mean sum, and which have gone exclusively, or nearly so, into the pockets of the professors. *The Times* correspondent gives a glowing account of the new Bill of the Government for dealing with the Scottish Universities, and predicts the universal satisfaction of all parties with its proposals. Bills that are framed to satisfy all parties generally satisfy none, and are things to be narrowly criticised. We hope this Bill will not escape a close examination by those who wish to see the usefulness of the Scotch Universities developed, and their standards maintained, or even elevated. The chief provisions of the Bill are for increasing the representation of the Council in the University Court. It is to give four assessors instead of one, but as the assessors of the Senatus are to be increased in the same proportion we do not quite see the advantage in the same glowing light as the correspondent of our contemporary. The Bill proposes to give new powers to the University Court, and especially to charge it with the direct administration and management of the whole revenues of each University. It is but reasonable that the Court should have such a power, seeing that it represents all parties—students, graduates, professors, and the public. It is unreasonable that such powers have been exercised so long, almost without control, by the professors, who are supposed to have higher functions in a University. Other changes are contemplated in the Bill, but these are the principal; and if they be made a little more secure and clear, they will be true reforms in institutions which have more than local importance.

HEALTH OF SCHOOLS.

THE time for the reassembling of schools after the Easter holidays reminds us of the important duties connected with such an event in the way of preventing the introduction of infectious disease among the scholars. It often happens that an outbreak of disease is caused by want of care on the part of the school authorities, or a selfish disregard of the consequences to other children on the part of parents who send their sons or daughters back from an infected home without any warning to the master. We would impress upon the head masters of schools the importance of making inquiries, in the case of all their scholars, whether there has been any illness in their homes or in the homes from which they return to school. It seems very desirable that in every instance a pupil rejoining school should bring a certificate from his parents, or the person in whose house he has been residing, that there had been no cases of illness in the house. Where any case had occurred, a certificate should be sent a few days before, stating its nature and giving such particulars as might satisfy the master or the medical officer of the school, where there is one, that the pupil may rejoin without any undue risk to the others. This is especially necessary at a time when epidemics of such diseases as scarlet fever, measles, and diphtheria, have been prevailing throughout the country. We would strongly impress upon parents and guardians the necessity for a straightforward avowal and full information respecting cases of disease in the family, for such a course is of the highest importance in the interests of their own children. If generally adopted, we should hear less of outbreaks of disease in schools, with their heartbreaking results, in many cases, from unjustifiable concealment and its natural consequence. We would also impress upon the head and house masters the importance of carefully watching the health of the boys for some time after their return, and on any indication of illness, even if apparently slight, the necessity of bringing the boy under the notice of the medical officer. In schools to which a medical officer is attached, it would be an excellent rule to have all the boys paraded before him the day after their return, when he might carefully note any who seemed out of health or condition, and see them daily for the first week or two of the term. We have had practical experience of the value of such inspections, and most strongly recommend their general adoption. The small amount of trouble involved

will be far more than compensated by the advantage gained in the early detection of disease. The duty of the medical officer of a school should be much more that of prevention than cure, thus saving the pupils not only from the dangers of serious disease, but also from the secondary ill-health which not unfrequently follows. We need hardly add that in all questions affecting health, and especially in those comprehended under the head of prophylaxis, the opinion of the medical officer should be supreme, for unless he is to be trusted fully in such matters it would be better to dispense with his services. We would remind masters and medical officers of the risk of infection from clothes, and would strongly recommend measures to be enforced for the disinfection of all the articles of clothing of boys coming from suspected homes.

IS CHLOROFORM A SAFE ANÆSTHETIC FOR CHILDREN?

ONE of the many points of interest connected with the medico-legal aspects of anæsthetics was introduced at a recent inquest, held by Mr. A. Braxton Hicks, upon the body of an infant who died under chloroform at one of our large hospitals. The child, aged five months, was operated upon for the removal of a nævus, and died from the effects of the chloroform after the operation had been completed. The report states that the "coroner elicited that children very rarely die under chloroform; they take it readily, and easily recover." Children, it is true, take this anæsthetic fairly well, but it is hardly consonant with our present state of knowledge to allege that fatalities among infants and children under fifteen are less frequent than among adults, always providing the individual in either category is not the subject of disease. The ill-fed and poorly-nourished children who come to our hospitals are not favourable subjects for chloroform administration, and the belief, which we fear is only too prevalent, that the young rarely die under its influence is likely to aid in increasing the number of victims who are yearly sacrificed to chloroform. It is highly probable that, when healthy members of the community are compared, no decennial period of life can be selected as being less obnoxious to chloroform than any other. Snow's tables, although faulty in some points, show, and we believe truly, that the maximum of deaths occur from chloroform between the ages of fifteen and forty-five; but such deaths are not to be attributed simply to an age liability, but to many intercurrent circumstances conditioning life during that busiest period of existence. When children are too small to render the exhibition of nitrous oxide gas and ether advisable, it is wiser to employ chloroform diluted with ether, as in the A.C.E. or one of the many kindred mixtures.

SOLITARY CONFINEMENT.

THE question of solitary confinement—a method of punishment to which we have frequently alluded with disapprobation—has recently been occupying the attention of the French Senate, and it has been decided, after some considerable discussion, that in future criminals who have had the sentence of death originally pronounced upon them commuted into penal servitude for life shall undergo six years' seclusion in the cell previously to being sent to New Caledonia. The reports made by the doctors attached to the French prisons, which were submitted to the Senate, declare that solitary confinement does not injuriously affect the health of prisoners. As a rule, there are not many invalids, we are told, at Mazas, and that consequently there is less mortality there, where the prisoners are isolated, than in the common prisons. Twelve months and a day has, till now, been the limit of this sentence in France, and very frequently three, six, or nine months only have been inflicted. A more prolonged period, such as six years or more, of complete solitude, can scarcely augment any salutary effect of the first year, whilst it must necessarily produce undesirable consequences. We shall watch with interest the effect on the health and intelligence of French prisoners of this new departure, but have little expectation of being convinced of any error in our previous condemnations of the system of solitary confinement.

BURNING AND FLUSHING OF THE FACE.

THE numerous structures entering into the physiological composition of the face afford one of the best arguments for not explaining every morbid symptom of this region on the comprehensive vaso-motor theory. Mere flushing of the face or blushing, which is hyperæmia, is sufficiently accounted for on the vascular theory of dilatation, but we cannot consider this theory adequate to account for the "burning," which is a sensation—a mental affection, with or without a corresponding physical effect. It so happens that flushing and burning may coexist, and even a third factor, considerably increased local heat, may participate in the group of symptoms. The burning sensation may exist alone or may be attended with hyperthermia and without hyperæmia. This sensation of heat referred to the face, when existing in entire isolation, may be purely subjective, and is then to be regarded as the expression of some alteration either in the sensory nucleus of the fifth nerve or in its representative in the cortical grey matter of the brain. Not uncommonly this alteration is excited through the agency of an irritation in the gastro-enteric apparatus. The best remedies for these facial symptoms of abdominal mischief consist in a thorough scrutiny of the dietary, and in the employment of alkalies, bromides, and small doses of digitalis. The dietary is often planned on an unsatisfactory basis, and generally there is some excess of proteid or fatty material, whilst in some cases an indigestible carbohydrate is evidently a potent cause of the mischief.

THE HORSE TAX.

THE Excise vote providing for this new tax was before the House of Commons on the 9th inst., and, as so appearing, it will lay the impost of £1 upon every horse with the exception of unbroken horses, ponies of less than thirteen hands, horses "*kept solely for the purposes of trade or husbandry*," brood mares, and horse-dealers' stock. It will be observed that there is here no provision for the exemption of medical men in respect of horses employed by them in the course of their practice; but it has been subsequently stated, and apparently with some authority, that the Chancellor of the Exchequer will be prepared to follow an old precedent and allow an exemption to the extent of one-half the tax to medical men and ministers of religion. This concession will not, however, meet the objections which are entertained by medical practitioners, and it seems to us to amount only to a very unsound compromise. A medical man keeps his horse, as a rule, not for the purposes of pleasure or display, but for the practically exclusive object of facilitating the locomotion incidental to his professional duties. Without such facilities he would waste so much time and strength in the purely accessory object of passing from place to place as to be unable to get through more than a very small fraction of the work which he is actually able to dispose of. Hence the advantage of his employment of horse power accrues not to himself, but to his patients—that is to say, to the public of his neighbourhood. It is surely very anomalous that he should be taxed for possessing and employing such an addition to his professional equipment. The public already benefits by it principally and directly; its possessor only indirectly, or at

most incidentally. Surely it is quite unjustifiable on principle, as it is certainly very oppressive in practice, for the public to make these facilities, by which it already profits, the occasion of an exaction from their unfortunate owner. The only sound principle is that of total exemption, for a tax of 10*s.* is, on theoretical grounds, as indefensible as one of double that amount. This is a matter of such very large concern to the profession as a whole that we hope steps will be taken to lay the objections to the principle of such taxation, as applied to horses employed by medical men, before the Government by means of a representative deputation.

EARLY VACCINATION.

AN infant aged four weeks, who died from suffocation, was the subject of a coroner's inquest at East Greenwich last week. That the death was due to suffocation only was perfectly obvious; but the baby had been vaccinated when six days old, and the jury added to their verdict that this was too young an age to vaccinate a child, and desired the coroner to make a representation to the authorities "with a view to the prevention of similar cases in the future." Whether the jury hope to prevent the suffocation of children by this means is not quite clear, but we are led to assume this is their object; they appear, however, to have been informed by the practitioner who made the post-mortem examination that it was certainly not safe to vaccinate a child at so early an age, and on this point we may say a word. The child had been born in the Greenwich Union Infirmary, and children born in such institutions would, unless vaccinated before leaving, go out into the world and remain unprotected against small-pox, for these cases cannot often be traced by vaccination officers. There was, therefore, much reason for the vaccination of the child if it could be done without undue risk. Experience has amply shown that children at this very early period of life bear vaccination well, and we have no hesitation in saying that this operation is as nothing compared with the remaining susceptible to small-pox. We trust, therefore, the Greenwich guardians will not be moved to prevent the early vaccination of children born in their institutions.

OPHTHALMOLOGY IN BRUSSELS.

DR. J. COPPEZ, in a report of the ophthalmic department of the Hospital of Saint Jean, in Brussels, makes some instructive remarks on the importance of ophthalmology, and passes some severe strictures on the incompetence of many Belgian practitioners in dealing with eye cases, which call to mind rather forcibly the remarks made not long ago by Dr. Osio, of Madrid, as to the way in which eye diseases are only too often managed or mismanaged by general practitioners in Spain. The material which is available for clinical instruction in the ophthalmic department of the Hospital Saint Jean is ample, as may be judged by the fact that during the year 1887 some 6000 cases were seen, and more than 1000 operations performed, of which 174 were for cataract, 115 were iridectomies, and 130 squint operations. The value of ophthalmoscopy in a large number of diseased conditions which usually come under the notice of the general physician or surgeon is insisted upon by Dr. Coppez, who remarks, in particular, that all patients with Bright's disease who suffer from amblyopia due to albuminuric retinitis die in a very short time. To this rule he has never met with an exception. "Is it not sad," he writes, "that thirty years after the discoveries of Donders the majority of practitioners are unacquainted with the elements of optometry and ophthalmology, and treat their patients who complain of eye affections as the medical men of the last century might have treated them? So wise women, fortune-tellers, quacks, conjurors, and empirics of every variety in rural districts, and sometimes, indeed, in the capital itself, enjoy far more reputation amongst people who suffer from their eyes than most qualified men. The reason is not far to seek. In fact, instruction in ophthalmology is entirely neglected in the University of Brussels, the students appearing to have a peculiar distaste for it. Can we be astonished, after this state of things, that the majority of students holding hospital appointments who come into our department appear quite alarmed at the sight of the instruments which are used in diagnosis?"

IMPERIAL HONOURS TO SIR MORELL MACKENZIE AND MR. MARK HOVELL.

IT is gratifying to English medical journalists to place on record any proof of the esteem of distinguished foreigners for English physicians. The decorations conferred by the Emperor of Germany on Sir Morell Mackenzie and Mr. Hovell are almost unique in their circumstances and significance. To Sir Morell Mackenzie, on his morning visit on Monday, the Emperor handed the Grand Cross of the Hohenzollern Order, with the Star of the same Order. To Mr. Hovell he gave the Second Class of the Kronen Order After shaking hands warmly with them both, he turned to Sir Morell and said: "When you first came to Berlin I had confidence in you, because you were recommended to me by my German doctors, but I have since learned to appreciate your skill myself. I have much pleasure in giving you this Order, in recognition of your valuable services, and in remembrance of my accession to the Throne." Of these gracious words of the Emperor, not the least gratifying to the profession in England is the allusion to his own German doctors and their recommendation of Sir Morell to His Majesty. It is to the credit of our brethren in Germany that they were magnanimous enough to recommend an English surgeon. There is no fear of any lasting misunderstanding or jealousy between the profession in England and Germany. Nowhere in the world is German medical and surgical science and art more appreciated than in England and by the English profession, and the great trust displayed in our English brethren at this crisis by Germany in no way diminishes this feeling. Sir Morell Mackenzie and Mr. Hovell are to be congratulated. The decorations they have received they are likely to be permitted to wear, for it is announced that the Emperor has asked Queen Victoria to give her Royal permission to this effect. We have only to wish both these gentlemen the long enjoyment of their honours, and that they may have the satisfaction of prolonging, with the help of their German *confrères*, the great life of the Emperor, and of leaving intact the mutual respect of the profession in Germany and England.

VEGETABLE ALBUMENS.

Do vegetable albumens constitute as good a diet for man as those derived from the animal kingdom? In a paper contained in the *Zeitschrift für Biologie*, Dr. Rutgers asks the above question, and gives the following reply as the result of his experiments. First, vegetable albumens are capable of supplying the place of the ordinary albumens we are accustomed to consume as food, without causing any disturbance of the nitrogenous balance in the economy; secondly, beans and peas overcharge the alimentary tract, not only owing to their solids, but to their disposition to develop gas; whilst meat and rice cause no disturbance, and therefore contrast favourably with them. There are consequently various contra-indications to an exclusively vegetable diet. The acidity of the stomach as well as of the urine are much less upon an exclusively vegetable than upon an ordinary mixed diet. Milk, if not taken as an exclusive diet, can be very perfectly digested by an adult.

UNWHOLESOME BATH-ROOMS.

IN our last issue we had occasion to refer to some of the advantages of cold bathing in suitable cases. An unfortunate occurrence, which was lately the subject of a coroner's inquest, may now serve to introduce some remarks on the hygiene of the bath-room, with special reference to its frequent abuse when warm water is the means of ablution. About a fortnight since, a gentleman aged seventy-four years was found sitting dead in a warm bath, which he had entered a short time previously. According to the medical evidence, death was due to syncope, induced in all probability by the heat of the room. Here doubtless a predisposing cause was also at work—namely, the advanced age of the deceased, which would render him the more susceptible to the always rather depressing influence of warm bathing. Add to these unfavourable, if unavoidable, conditions the presence of a stifling, steam-laden atmosphere, and we need not feel surprised at a statement by the coroner that deaths in similar circumstances are not uncommon. Now that almost every house of moderate rental has its bath-room, the size and ventilation of these apartments are matters of some importance. There is too great a tendency to think that any odd corner may be used for this purpose, that the first and only necessity is to have the required water supply laid on, and that for the short time during which the bath is used the quality of atmosphere is quite a secondary matter. It should not need the teaching of a series of fatal accidents to impress an opposite principle. Clearly a room which in course of use becomes rapidly charged with water vapour should exceed rather than come short of the minimum cubic space (say 800 cubic feet) required for each inmate of a normally constructed house. With regard to ventilation, ancient prejudices in favour of closed doors and windows, and solid walls have to be combated. These have, however, been pretty generally overcome in the case of sitting-rooms and bedrooms, and should not prove insuperable in the case of the bath-room. There is no necessity for the introduction of cold air from without, for a sufficiently pure atmosphere can usually be obtained from the interior of the house, and an outlet funnel with revolving cowl is all that is required for extraction of the old air and excess of water vapour. Seeing, therefore, that the remedies are apparent, we may hope that in future builders and householders will agree to employ them against the now too evident risks of a warm bath at home.

DERMATOSES FOLLOWING MENTAL SHOCK.

DR. DUBOIS-HAVENITH, writing in *La Clinique*, adds some further instances of dermatoses following mental shock to the case of purpura hæmorrhagica recently described by Professor E. de Smet. 1. An unmarried lady who had been present when a man armed with a spade violently attacked another man was much upset by the sight, and did not regain her accustomed composure for some days. Three weeks later bullæ presented themselves on different parts of the body, and before long the entire cutaneous surface was covered with an eruption, having the characters of foliaceous pemphigus, accompanied by incessant pruritus. Arsenic, quinine, and other remedies exercised but little effect, or at least only a temporary one, for the patient succumbed after four years in a state of marasmus. 2. A little girl of ten was with difficulty saved from a burning house. From that time her appetite became bad, and she was haunted by constant nightmares and visions of houses on fire. A month afterwards a pemphigoid eruption made its appearance on the nose. It spread to the mouth and then disappeared. Shortly, however, it again manifested itself, covering a large part of the body. Iron and quinine appeared to be of but little service, for in nine months' time the eruption was as copious as ever. Two or three drops of Fowler's solution of arsenic three times a day soon worked a marvellous improvement, which it was evident was really due to the arsenic, for twice when the medicine was intermitted for a time the eruption returned. 3. A married woman had a quarrel with her husband, who struck her on the cheek with a key. Four days afterwards an eruption came out on the wrists, the hands, and the feet. This eruption had the characters of Hebra's multiform exudative erythema, and was accompanied by intense itching. On the lips there was a vesicular tumefied eruption, and patches on the tongue. The whole disappeared in three weeks.

THE LONDON HOSPITAL.

ON the 11th inst. the Lord Mayor presided over a public meeting held at the Mansion House in aid of the third quinquennial maintenance appeal on behalf of the London Hospital. The first resolution, which was to the effect that the London Hospital—the only large general hospital for the whole of the East-end and the adjacent suburbs—is of vital importance to the working population there, and worthy of the liberal support of all classes, was moved by the Duke of Cambridge, seconded by Sir R. Fowler, M.P., supported by the Rev. J. Kitto, and carried unanimously. A second resolution, pledging the meeting to do all in their power to aid in raising the necessary funds, was proposed by Mr. M. W. Collet (Governor of the Bank of England), seconded by Sir E. H. Currie, and agreed to. It was decided to form a committee of appeal to carry on the work of the special fund; and to their labours, considering that the assured income of the hospital is only £16,480, and that the ordinary annual expenditure exceeds £50,800, we cordially wish success. In the course of the proceedings on the 11th inst. the secretary announced the receipt of subscriptions and donations amounting to upwards of £6500.

RAILWAY HOURS.

THE return obtained by Earl de la Warr of weekly-paid railway servants who in the months of July, 1886, and January, 1887, were on duty for more than twelve hours at a time, reveals a vast amount of overwork which in the public interest, as well as in the interest of the men immediately concerned, ought to be avoided. It is shocking to think that the highly responsible duty devolving upon a signalman or an engine-driver in charge of a passenger train should sometimes be confided to the hands of a man who has been working for upwards of eighteen hours at a stretch. Yet this appears from the return to be a far from uncommon occurrence. To take, for example, the Great Eastern Railway. In January of last year this company had a staff of 1324 engine-drivers and firemen. Of these men 1104 were engaged during the month on one or more occasions for more than twelve hours continuously, and among them these 1104 men made a record of 1470 instances of continuous duty exceeding eighteen hours. Indeed, during the month every one of these overworked men was kept to duty for more than twelve hours on thirteen days upon an average; while no fewer than 368 were "permitted" to resume duty after one of these long stretches of labour after a shorter interval than eight hours' rest. Yet the Great Eastern is by no means an exceptional railway. All the great companies exact work on something like the same scale, and many of the smaller companies are even worse. Facts like these do not call for comment; comment could only weaken their effect. They call for indignation, and indignation is exactly the feeling which they awaken in an unprejudiced reader's mind. It is true that some of the companies seek by explanations to reduce the effect of the exposure which they have been compelled to make. Thus, the manager of the London and North

Western Company is at pains to explain that the passenger guards, of whom only 10 per cent. make longer duty than twelve hours at all, and none so long as eighteen hours, work short time on one day to balance the overtime of another. The plea is not a very sufficient one, for chance leisure realised at irregular intervals is comparatively worthless for the purposes of recuperation. But such as it is, it serves to show how cruel, even under the official point of view, is the infliction of uncompensated overtime upon 90 per cent. of the company's far more numerous engine-drivers and firemen, who between them made overtime beyond the twelve hours of over 85,000 hours during the month of January, or at the rate of twenty-two hours per man. What the same manager can mean by saying, *à propos* of this fact, that "every man whose duty is at any time unduly prolonged has only to seek for relief to obtain it" we are at a loss to imagine. The machinery of relief which he is at pains to describe must be singularly inefficient, to judge it by results. We are much averse, in the abstract, to the intervention in matters of this sort of the Legislature with legal regulations and restrictions upon the hours and conditions of labour, but we think that public opinion should make itself unmistakably heard on such a point, so that persons in the quasi-public position of railway directors might feel that they could only exact a tale of labour such as is described in the present return under the penalty of public execration.

SELF-MEDICATION.

ON the 7th inst., an inquiry was held at Higginshaw near Bolton, on the body of James Frederick Smith, an engine-fitter, who died on the 5th inst., another victim to the habit of self-medication. The deceased, it seems, suffered from gout, and by the advice of a companion sent to a herbalist for one ounce of colchicum seed, one drachm of iodide of potassium, slippery elm, and guaiacum, 4*d.* being paid for the ingredients. The deceased placed the drugs in boiling water and drank the decoction, death, as before stated, resulting. The herbalist, in his evidence at the inquest, said that he did not label anything "Poison," because he was not allowed to sell it. The jury returned a verdict of "Accidental death." Colchicum is a favourite and valuable remedy in gout, but when (as in the case under notice) an ignorant man, by the advice of an equally ignorant comrade, takes what is calculated as sixteen times the usual medicinal dose of the drug, the consequences may easily be foretold.

SMALL-POX ISOLATION AT SWINTON.

AT Swinton, Yorks, a disused brick "hovel" connected with an old pottery was hurriedly converted into a small-pox hospital towards the close of last year, and the work, including the provision of a wooden administrative cottage, would appear to have been creditably carried out. But the story of the building embodies some important lessons. No isolation hospital could be pressed upon the sanitary authority with any success until small-pox infection became a real danger. Then it was that Mr. W. M. Jones, the medical officer of health, succeeded in showing, by certain calculations, how great would be the mere money loss if small-pox did invade Swinton. But this did not secure the hospital; it only obtained for him the authority to at once call the board of health together as soon as a case had actually arisen. This tardy action had to be dearly paid for, for when the disease appeared no hospital was ready, and a number of cases, including three deaths, took place before the building was available. It was, however, completed with considerable speed, and, unlike most such buildings, it largely served the purpose of checking the epidemic. It now remains to be seen how far an emergency hospital of this sort will really meet the permanent requirements of the district—that is to say, whether first attacks of diseases such as scarlet fever, and which cause a far greater mortality in our midst than small-pox does, will be isolated in it, or whether, like many other such buildings, it will be shut up as soon as the small-pox panic is over, the district remaining as regards other infectious diseases, without means of isolation as heretofore. We hope this may not be the case; but a disused pottery hovel, even when substantial, is not, as a rule, the sort of building to attract the infectious sick, and if it fail in this respect, its provision may, in the end, turn out to have been the reverse of a permanent benefit to the district.

DIABETES INSIPIDUS IN A YOUNG CHILD.

DR. JULIUS WEISZBARTH of Buda-Pesth publishes in a Hungarian medical journal an account of a case of diabetes insipidus occurring in a little girl of only four and a half years of age. The daily quantity of urine was from about six to thirteen litres, the specific gravity being about 1002, and no abnormal constituents being found in it. The chief symptom was the violent and unquenchable thirst, the quantity of water drunk varying from eight to ten litres per diem. When attempts were made to withhold liquid, the child became most distressed with thirst. She always seemed better when allowed to have as much to drink as she wished. By adding quinine to the water the quantity was reduced to three litres and a half, but only for a day or two, for as soon as the child became accustomed to the bitter taste she drank as freely as before. No medication appeared to have any effect on the disease. After being about six weeks in hospital the child succumbed to an attack of diphtheria. Before death the quantity of urine passed diminished, as also the excessive thirst. The post-mortem examination revealed slight œdema of the medulla oblongata, diphtheria of the fauces and nares, strumous disease of the mediastinal and bronchial glands, tubercle in the lungs, bronchial congestion, hypertrophy and induration of the liver, chronic catarrh of the stomach, follicular enteritis of the large intestine, hypertrophy of the muscular structure of the bladder, and dilatation of the ureters.

CHURCH BELLS AND SALVATION ARMY DRUMS.

OCCASIONALLY one finds that the spirit and purpose of religion are apt to be lost sight of in the manner of its public presentation. Thus we feel a want when something like a faith without feeling is preached in the name of utility. Not less evident, however, is the failure of discretion when enthusiasm becomes ecstasy, and the unbridled emotion leads its devotees to ignore the present realities of daily life. Illiberality of judgment, and disregard for the legitimate, if contrary, opinion of others, are the outcome of this latter weakness, and examples of its pernicious consequences are never far to seek. By way of illustration we may briefly refer to a singular meeting of extremes in the same error of inconsideration which has lately been exposed in the daily press. A letter from a clergyman, published a few days ago, complained of the noisy Sabbath observed by the members of the Salvation Army. This has been succeeded, after a short interval, by a similar protest—brought forward partly on medical grounds—against a Ritualistic congregation by a member of our own profession, on account of the "clang, from early morn till late at night," of the church bell. Which of these two modes of disturbance is the less objectionable is open to question. The correspondent last mentioned gives the preference to the "Army" rather than the Church, perhaps because of its more mobile character. Without discussing this debatable point, how-

ever, we may truly assert that the comfort of invalids who may be thus noisily roused from needful repose, and the amenity of the general public, are alike disregarded by both. It would be somewhat captious, perhaps, though certainly not unreasonable, to call for the suppression of one or the other obnoxious custom by authoritative legal machinery; but there is no reason why the householder's one remedy in all such cases, his power of objection, should not be effectually exercised for his protection against one or both of the nuisances above named. We may also be allowed to suggest that religious bodies, of whatever denomination, would do well to cultivate that quiet but efficient form of energy which was the synonym of successful effort in the early Christian Church. We believe that the only lawful *ringing* of church bells is for a convenient time previously to morning and evening prayer, and that all other bell-ringing, except for funerals, is quite illegal.

ARMY MEDICAL STAFF CORPS.

WE observe with regret that the Commander-in-Chief has issued a General Order on the subject of recruiting which, in our opinion, will act most injuriously on the hospital service. It restricts the enlistment of men for the Medical Staff Corps to "three years' Army and nine years' Reserve service, which will be converted into four years' Army and eight years' Reserve service if the period of army service expires while the man is serving abroad." The effect of this will be that the men of the corps will scarcely have become skilled in their nursing duties as orderlies when they will be removed and replaced by raw, unskilled men, to the great detriment of the sick. There is nothing on which, in many cases, the successful treatment depends so much as on careful skilled nursing, and yet the new regulation will put this almost out of the power of the medical officers. Another drawback to the system will be the want of the older men on whom much of the steadiness and regularity of conduct of the corps depends. A body composed entirely, with the probable exception of non-commissioned officers, of young, untrained men, on whom the duties of the care and nursing of the sick will depend, holds out a most unpromising prospect for the soldiers who come under hospital treatment. We cannot believe that the new regulation has been made with the concurrence of the Director-General. Sir T. Crawford knows too well the value of trained orderlies in a hospital to be likely to have consented, if, indeed, he were consulted at all, to a measure which is certain to produce such unsatisfactory results as this General Order. Can this possibly be one of the benefits to be derived from the new organisation of the War Office?

SEWAGE DISPOSAL AT HUDDERSFIELD.

LARGE works of sewerage have within recent years been carried out in Huddersfield, especially in the matter of an intercepting sewer. By this means there is now collected at Deighton a dry-weather daily flow of 4,000,000 gallons which passes in its crude state into the Colne. To meet this evil, the corporation have decided to adopt some measures for properly dealing with the sewage at the outfall, and a committee, including Mr. R. S. Dugdale, the borough surveyor, and Dr. Cameron, the medical officer of health, have visited a number of towns with a view of eliciting information as to the success of the various methods of treating sewage now in operation. The report issued by them will be of considerable value as summarising a large amount of useful knowledge as to existing processes. As to the Huddersfield sewage, the committee have decided to recommend precipitation upon the intermittent system, and subsequent filtration. They do this on financial grounds, both as to first cost and maintenance expenses; for reasons of simplicity in working; and because they are convinced that a satisfactory effluent can be obtained. Apparently the greatest difficulty in contemplation is the sludge, which it is suggested may be pressed into small bulk, as at Acton and Coventry, or burned into useful clinkers by means of a destructor, which also receives ashes &c. as at Ealing.

THE LESSON OF THE FATE OF THE PHARMACY BILL.

ON the second reading of the Pharmacy Bill the House was counted out, there not being forty members present. This fact shows how impossible it is to get any adequate attention in Parliament to such questions as those raised in the Pharmacy Bill—the education of druggists. They are, of course, of enormous importance. The life and death of hundreds perhaps in the year turn upon such questions. But forty members could not be got to consider them. Gentlemen who know nothing of such subjects, and whose tastes are spoiled by the highly spiced debates on party subjects, cannot be expected to come down to the consideration of such tame questions as the education which fits for the druggist's business. There are many other questions of which the same is true. The lesson is obvious. Such subjects should be threshed out in a committee appointed for this special purpose. Unless and until this is done the legislation on such subjects will either be inadequate or positively injurious.

UNHEALTHY HOUSES IN LEEDS.

THE Sanitary Committee of the Leeds Corporation are taking some decided action towards dealing with the large number of dwelling-houses which, in their present state, are unwholesome, and as such unfit for habitation. The task of dealing with unwholesome property is very generally a disagreeable one, and many sanitary authorities need the stimulus of outside pressure before undertaking it heartily and thoroughly. The sanitary state and the mortality of Leeds are believed to be unfavourably influenced to an important extent by property of the class referred to, and the borough medical officer of health has more than once reported adversely in this sense. Hence we are glad to see that the action of the committee receives the full support of an important portion of the local press.

"HAUNCHING HORSES."

UNDER the above heading, we would draw the attention of our readers to a game which is said to be fairly common in the south of London amongst stable boys and their friends. The game is one which is hardly known to the public at large, but its dangerous character will be at once apparent when we add that two boys were admitted into St. Thomas's Hospital last week suffering from compound fracture of the skull received whilst playing at this game. It is called by the boys "hunching," and is played as follows: The stable boys either hold the horse's head or the horse may be tied up by a halter, and then the younger boys hit the horse across the haunches with a knotted rope in order to make him kick out, whilst the striker rushes out of the way, to avoid the kick. The game is generally played in a stable yard, but sometimes when horses are being led to water. The patients, boys aged twelve and eight, although they had often played at it, have never seen anyone seriously damaged by it. These boys were admitted under the care of Mr. Anderson on April 3rd and 5th respectively, from Battersea and Lambeth, and were strangers, but each presented a compound fracture of the skull in the temporal region almost identical in position, though the second boy had

more depression of bone and had a severe convulsive seizure soon after admission. They both walked to the hospital, but since the first day, with the exception of severe vomiting, have progressed satisfactorily. They are fortunate to have escaped with comparatively so little damage. The blow received must have been a slanting one, the boy throwing his head backwards to avoid it, otherwise a fatal result would have probably resulted. We trust it is only necessary to draw attention to this practice in order to put the owners of horses on their guard against the cruelty to their animals which is the result of the game, and parents of boys in the position of society to which these patients belong to the necessity of keeping them from chances of practising it. It might also be worth the while of the Society for the Prevention of Cruelty to Animals to make inquiries into the subject.

HEALTH OF THE GERMAN EMPEROR.

WE learn from Charlottenburg that the condition of the Emperor Frederick's larynx is unchanged. This is so far satisfactory, but we regret to add that His Majesty's general health has been less favourable. This, however, is beyond doubt due to inclemency of the weather which has of late prevailed at Berlin, and which has necessitated to a great extent the confinement of the illustrious patient to his apartments.

THE VACCINATION ACTS.

A BILL has been brought in by Mr. Picton and some other members of Parliament, having as its object the repeal of the compulsory clauses of the Vaccination Acts. This question may be argued on grounds which do not touch upon the value of vaccination as a protection against small-pox. Whether or not a parent has a right to leave his child susceptible to a fatal disease is a point which the Legislature must decide, but it must be borne in mind that the compulsory clauses exist for the benefit of the helpless infant who is unable to protect itself, and who cannot possibly exercise any control over the prejudices of its parents. As an example of the tendency of more recent times to assert the right of State interference in such matters, we may cite the Compulsory Education Acts.

PITFALLS FOR YOUNG PRACTITIONERS—"COVERING" UNQUALIFIED PRACTICE.

WE publish at page 756 two letters which are worthy of the attention of our readers, especially of those recently qualified, and who are on the look out for honourable work. Our correspondent has very properly given us leave to publish the letter he received. Had he fallen into the trap which was laid for him, he would, for the time being, have been guilty undoubtedly of "covering" an unqualified medical practitioner. But we cannot doubt that he would soon have discovered the situation and exposed the fraud.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Van der Laan, a well-known ophthalmologist of Dutch birth, practising for many years past in Lisbon, where he edited an ophthalmological journal.—Dr. J. Garfunkel, physician to the Maria Lying-in Hospital in St. Petersburg.—Señor Don Dr. Gustavo Aragon y Muñoz, surgeon to the Civil Hospital of Havana, where his services were acknowledged by the Government by the bestowal of the knighthood of the Order of Hospitallers.

THE thirty-ninth annual session of the American Medical Association will be held at Cincinnati, Ohio, on May 8th, 9th, 10th, and 11th.

ON April 5th appeared the first number of a weekly medical journal in Vienna, which is already well supplied with such literature. Its title is *Wiener Klinische Wochenschrift*, and it is the organ of the Royal-Imperial Medical Society. The editor is Dr. Gustav Riehl, who has secured the co-operation and support of many well-known physicians and surgeons. Thus Professor Billroth contributes the first article on Ligation of the Thyroidean Arteries as an Aid towards Atrophy of Goitre, and Professor von Bamberger writes upon the applicability of Oertel's method to the treatment of Valvular Disease of the Heart. The journal is produced in the style and method of its Berlin namesake, and we cannot but wish it an equally successful career.

THE famous German chemist, Professor August Wilhelm Hofmann, celebrated his seventieth birthday on the 8th inst., when the Emperor conferred upon him a title of nobility, and the Empress, and also Queen Victoria, to whom the Professor became known during his twenty years' sojourn in England as superintendent of the Royal College of Chemistry, and afterwards of the laboratory of the School of Mines, sent him their portraits, handsomely framed. Professor von Hofmann also received a large number of congratulatory telegrams, addresses, and diplomas from various scientific societies and corporations at home and abroad.

WE regret to learn that the *Index Medicus* is not yet self-supporting, and has more need of the earnest aid of the scholarly members of the profession. We urge upon all our members who are interested in current medical literature, to which this publication is one of the most complete and satisfactory keys, the necessity of maintaining the work by their subscriptions.

THE publication of a weekly journal under the name of *The Nursing Record* has just commenced. The first issue contains a review of the various steps which have been taken, and reports of the various meetings which have been held, in support of the British Nurses' Association, in addition to several papers by members of the nursing profession.

TEN of the special medical and surgical associations of America have united under the name of the Congress of American Physicians and Surgeons, which will hold its first session on September 17th, 18th, and 19th next at Washington.

THE Russian Military Pharmacopœia is about to be revised by a commission appointed for the purpose, with the President of the Military Medical Academy of St. Petersburg, Dr. Sushchinski, as chairman.

MR. HERBERT PENNELL HAWKINS, M.A., M.B., B.S. Oxon., Radcliffe Travelling Fellow, has been appointed Resident Assistant Physician to St. Thomas's Hospital, in succession to Dr. H. W. G. MacKenzie, appointed Medical Registrar.

LEICESTER INFIRMARY.—Under the presidency of Sir A. G. Hazlerigg, Bart., the annual meeting of the supporters of this institution was held at the County Assembly Rooms last week. It appears that the pressure upon the resources of the institution during the past year had been very severe, by a large influx of fever patients. A children's hospital was an urgent necessity. A committee had been appointed to consider the subject, and it was contemplated that in a short time the movement would take a definite and organised form, and that thus a hospital adequate to the growing requirements of the borough would be provided.

THE LANCET

Special Sanitary Commission

ON

"SWEATING" AMONG TAILORS AT LIVERPOOL AND MANCHESTER.

THE agitation we originated four years ago by the publication of a special report on the sanitary condition of the "sweating dens" established in the East-end of London by Polish and German Jews has already borne good fruit. A Royal Commission, appointed by the House of Lords, is now investigating the subject, so far, in any case, as the metropolis is concerned; and we can fairly boast that public opinion and public sympathy have been thoroughly roused. Such good results have naturally tempted us to carry the investigation further afield, for it unfortunately happens that the grievance is not restricted to the metropolis: "sweating" among tailors is extensively practised at Manchester, Liverpool, Leeds, Bristol, and other important towns. What we have now seen in some of these provincial centres proves how great is the evil and how rapidly it is spreading. Though it is impossible to know and to personally visit all the dens, it is easy to ascertain sufficient to show that we are dealing with a deep-seated sore in our social condition which must be rooted out.

In Liverpool, for instance, the export trade in ready-made clothes is relatively not so important; nevertheless, there are numerous sweating dens in the town. The tailoring trade may be divided into three branches. First, there are the thoroughly competent journeymen tailors. These work, as a rule, for what are known as "order shops." They make gentlemen's clothes generally on the premises and near the tailor's shop. There are about 700 tailors of this description at Liverpool. Of these 500 belong to the Amalgamated Tailors' Society. There is no difficulty in ascertaining these figures; and, though given in round numbers, their approximate accuracy may be relied upon, allowance of course being made for slight fluctuations. These skilled workers are paid according to the regular tariff, or "log," and earn nominally 6*d.* per hour, though the quicker and more skilful among them make more, while others make a little less. The hours for work, as fixed by the Tailors' Society, are from 7 A.M. to 7 P.M. from November to March, and from 6 A.M. to 7 P.M. from March to October. If in full work, this would imply earnings of, on an average, 36*s.* for a week of seventy-two hours, with no fixed time for meals. The meals are often eaten in the workshop and while at work. It is important to take these facts into consideration, for this is the condition of the highest branches of the trade—namely, what obtains among the best organised and most skilful of the workmen. In Liverpool, a man with a wife and small family could not get a decent dwelling for less than 7*s.* 6*d.* per week; and if he went to the suburbs, at a distance of some three miles, this would cost him 6*s.* a week. But this income, insufficient as it may seem, unless the wife and family are also made to work, cannot be relied upon. Full work can rarely be obtained for more than seven months in the year.

The irregularity of employment and of income must be a fruitful source of disease. For instance, while there is much enforced idleness, a tailor has often to perform "nine days' work in a week." The insufficient sleep, the strain to the eyes, the lack of proper time to take meals or out-door exercise, and the prolonged confinement in unwholesome and over-heated workshops are naturally important factors in undermining the constitution of even the most fortunate among the journeymen tailors. There are in Liverpool a large number of shops enjoying a high reputation, and which are nevertheless known to the trade as "light-houses." This term signifies that the lights are kept burning till late at night, and that the employers are in the habit of "rushing" their men at the end of the week. A great deal of this irregularity might easily be avoided if more foresight and consideration for the health of the workers were displayed. There is great neglect in giving out the work at the beginning of the week, and the "cutters" are too often permitted to postpone cutting out the cloth till the Tuesday or Wednesday. Consequently the work has to be done in a hurry at the end of the week, to the detriment of the health of the workers. If, however, the hours of work could be limited for each day, the present distressing and injurious prevalence of overtime would be abolished, and a more rational system of production adopted. Many of the tailors, victims of all these irregularities, loudly protested in our presence that it was just as urgent, in their trade at least, to apply the Factory Act to adult male labour as it was to the work of women and children. However this may be, action under the Sanitary Act should certainly be taken, even in workshops where there is only adult male labour employed. We visited a workshop of this description in one of the best streets of Liverpool, belonging to a high-class tailor, where only the most skilled and highly paid workers are employed. The workshop apparently had been built in a back yard. It had the form of an attic, though it seemed below the level of the street. The walls on each side were about four feet high, and from them rose a slanting glass roof. There were no windows to open; but in the beam at the apex of the roof a board about eight inches wide and four feet long could be pulled open. This induced at once an insupportable down draught, so that in cold weather ventilation is practically impossible. The workshop is reached by a long underground passage, where there is no light whatever, and which only measures 24 inches in width. In an angle, halfway through the passage, there is a watercloset, kept, be it said to the credit of the workers, in a state of the most perfect cleanliness; but the closet has no ventilation whatever, and there was a urinal close by which was blocked up and offensive. At the end of the passage, close to the workshop, there is a huge furnace for heating the irons, which serves to ventilate this passage and draws up the effluvia from these drains. To enter the workshop it is necessary to climb up a rickety ladder and grope through a little door barely 3 ft. high. It is more like the entrance of a cabin in a barge than of a workshop where eight or ten men are constantly employed. If in such instances, and in consequence of the absence of women and children, the Factory Act cannot be of any avail, sanitary authorities should be able to insist on suitable ventilation for both closets and workshops.

The second branch of the tailoring trade may be described as that of the home worker. There are men who work in the privacy of their home, and, though the appellation is not absolutely correct, still they are very often called sweaters. Some of these home workers loyally adhere to the town "log," and refuse to do any "slop" work or anything under the established tariff. We visited several men of this category, and found them inhabiting comparatively comfortable houses, and working in rooms that did not suggest any particular danger from a sanitary point of view. To one and all we asked whether, considering that they did work for the outside public, they would acknowledge the principle that the public had the right to protect itself by establishing a sanitary control over their private dwellings. The answer was invariably the same. They would willingly consent to register their houses; they would welcome the visits of a sanitary inspector. Not only would this be a benefit so far as public health is concerned, but it would help to destroy the disloyal competition of those home workers who were content to live in the most villainous hovels, so as to be able to accept work at a lower price. This unfortunately is the case with the majority of home workers. Not only do they accept work at a disastrously low rate of remuneration, but they further reduce their income by bribing the foremen of various tailors' shops, so as to obtain the preference. In such cases the customer is doubly the loser. He pays a heavy price to get good clothes made by a thoroughly competent tailor. But the foreman, to secure a good bribe, gives the work out to an inferior man, who makes up the garments in a filthy home where there is every prospect of contamination. Thus the work is done badly, and under dangerous circumstances. These home workers also, by accepting employment under the tariff, so compete and undersell each other that many of them end by working for the Jew sweater at his prices, though they do not go to his den or work under his personal supervision. Hence the home worker has been indiscriminately called a sweater; and, indeed, he sometimes becomes a sweater in the more correct acceptation of the term. He will call his wife and children

to help him at his bench, and "sweat" profit out of them. At times even he will get outside help, and thus it is very difficult to draw a precise line between home work and sweating. Excepting, however, the higher class of home workers, who adhere to the workshop tariff, and who are described as being ready to welcome a system of registration and inspection, both home worker and sweater constitute a standing menace to public health. They are a source of danger—firstly, because, being insufficiently fed, overcrowded, overworked, and surrounded by filth, they are a ready prey to both constitutional and epidemic diseases; secondly, because the clothes made in such places are likely to become contaminated and to spread disease in other quarters of the town wherever they may be worn or purchased.

At Liverpool we visited several home workers of this inferior class. To each house we inspected—whether that of a master tailor's workshop, a sweating den, or a home worker's dwelling—we took careful note of the name and address of the parties concerned. But as our object is not to attack individuals, but to show the dangers arising from the entire system, we withhold these from publication. Taking, then, the home workers first, in a very small room, entirely devoid of furniture, we found a tailor squatted on the floor. He was making a coat of a very difficult and complicated description, for which he was to receive 7*s.* 6*d.*; whereas the work was worth, according to the ordinary tariff, 23*s.* This man declared he was alone and had no helpers, but confessed he was highly tempted to follow the example of the Jews and call in unskilled assistants, and doubtless profit by their work while teaching them as little as possible. The surroundings were very poverty-stricken. Another case was a cellar dwelling, some 5 ft. below the level of the street. Narrow stone steps, not 2 ft. wide, led down the street causeway, passing in front of the little window and down to the small door. The window rarely, if ever, was opened. The light, in great part cut off by the causeway of the street, could not reach the farther extremity of the room, and, of course, the direct rays of sunshine would be absolutely excluded. There was no through ventilation. The floor was paved with flag-stones, that lay on the bare earth. In the darkest corner of this cellar was the tailor's bed; in the lightest corner—that is, immediately under the window—was the board on which he works. Ever since this cellar had been inhabited, it could never once have been properly aired. The odour was of a peculiar and significant character. It was not the smell of any particular form of dirt, but a blending of odours that seemed to have mellowed with age, and, while losing the nature of any one special smell, acquired apparently the poisonous essence of a multiplicity of noxious exhalations. This cellar dwelling was only 6 ft. 6 in. in height. In a corner on the floor there was a drain that smelt so badly that the tailor's wife had blocked it up with cement, but there still remained a sink. There were also in this cellar four children, and though the tailor stated that he had two garrets upstairs, these garrets had no fireplace, and practically the family lived in one cellar, as it was furnished and possessed a good fire. The tailor at the time of our visit had been so ill as to be compelled to cease work, and considering the absolute impossibility of ventilating the room in which he lived, cooked, ate, and worked, this was in no wise surprising.

Another home worker lived in so small a front parlour that his bed took up the better part of the room. He had, however, been without work for three weeks. On all sides there were signs of squalor and misery, and the wife, who was nursing an infant, declared that but for the kindness of the landlord they would have been in the streets long ago. In a very wretched street we visited a tailor's home, where one workshop window measured 36 in. by 28 in., and the other only 16 in. by 36 in. The room was only 7 ft. high, and had no through ventilation. Here there were but two closets provided for four houses. Narrow, twisting stairs, without balustrade, led up to this workshop. Another case had equally depressing surroundings. The street was narrow, the houses, three storeys high, all seemed gloomy, silent, and poverty-stricken. In a different and wider street we found a home worker living over what was called a marine stores, the chief articles sold being rabbit skins, old rags, and other obnoxious refuse. Much of the dust arising from this unwholesome stock-in-trade entered the room occupied by the tailor and mixed with the clothes. Not far from one of the docks we found a particularly filthy front kitchen, with common stone flag floor, used as a workshop. The back gave on to a very small and badly kept wash-house. The tailor lived and worked in this low, damp kitchen with his wife and five children during the day. For the night there were three small rooms on the first floor. Most persons would hesitate to enter such a place, and no one would knowingly send his clothes there, yet the tailor declared he paid 6*s.* a week for this wretched accommodation. In the last case we visited, the house was so rickety and dilapidated that some building operations next door had caused a large portion of the wall to fall away. The dwelling consisted of three very small rooms, and here, perched high up on a board close to the small window to catch the little light the house afforded, a tailor and his wife worked incessantly. It will thus be seen that home work, even where there is no sweating, is not unattended with serious risk, as there is no control whatever in respect to general sanitation and cleanliness.

With respect to the sweating dens proper, we succeeded in visiting several at Liverpool. In the first we found four girls and four men working in a top room with only two small windows barely three feet square. There was another room with more workpeople. The whole place was dirty and sadly in need of sweeping. The closet flushing apparatus did not work, and there was but one closet for both men and women. The master sweater made coats here at half the proper price. The next workshop had windows on both sides, and was situated in what was evidently a small private house, and a place altogether unsuited for such purposes. The staircase was wretchedly narrow. There was a living room on the first floor; and, though the master sweater said he was under the Factory Act, the regular notice paper was not posted in the room. One of the girls working here did not seem to be thirteen years old. Complaints were made that the dust was either removed too often or not often enough. The ceiling of the workrooms was very low; the atmosphere overheated and unpleasant. In the same street there are several similar sweating establishments.

On a ground-floor front parlour of a private house we found four little girls all hard at work round a tailor's table. On the floor, in the back of the room, there was a baby in a cradle. The master sweater worked by the side of the baby, and watched the young girls. He was evidently much put out by our visit, which he did not fail to attribute to the malicious envy of trade rivals. The room was very small and close, and yet a fifth female worker subsequently made her appearance, when we ascertained that his shop is not registered, and has so far escaped the control of the inspector under the Factory Act. On inquiry of the neighbours, we learned that the young women often worked late at night, thus breaking the law. Apart from the smallness of the room, there is, immediately opposite the window, at a distance of some 10 ft., a huge dusthole, measuring some 8 ft. by 6 ft., and probably 6 ft. deep. Here a vast amount of refuse from the surrounding houses accumulates, and in the summer gives off such offensive odours that the work-girls declared they could not open the window; yet there is no means of obtaining air from the back of the house. In contrast with this place, we visited a capital workshop, where we counted eighteen women. There was plenty of air, windows on each side, skylights, and good closet accommodation. Here the workers may suffer from insufficient pay, but not from insufficient light and air. We next proceeded to a very small cottage, where we saw four women and girls in the front room very inconveniently placed. The window could not be opened without causing an insupportable draught; the house, scarcely fit to accommodate a small family, was absolutely unsuited for a workshop.

The same may be said of another place, though the house was a little larger. This place is occupied by a female sweater, who employs nine young girls. These ten persons, with two machines, all work in a front room measuring only 10 ft. by 13 ft. and 8 ft. 10 in. high. This does not give more than about 120 cubic feet per person. The workshop is not under the Factory Act. One of the workwomen said she had recently suffered from erysipelas. There is but one window in this room, and when the girls are all seated round the table, they are so crowded that they have to twist sideways and draw their thread out in a particular and unnatural manner, throwing their hands up in the air, so as to avoid wounding each other with the needle. They only make waistcoats; and two of the girls—one with a machine and the other finishing with the needle—can

make sixty buttonholes in an hour. The general price for buttonholes made by hand is 1½*d.* each, and it is customary to calculate four to the hour. It is also customary to pay from 5*s.* 6*d.* to 7*s.* 6*d.* for the making of waistcoats; whereas this female sweater contracts to make waistcoats for 10*d.* or 1*s.* each, and from this miserable pittance succeeds in sweating a profit out of her nine work-girls. The back yard of these premises was dirty, wanted repaving, and there was a great accumulation of stagnant water. From this depressing experience we came to a well-aired workshop, with windows on both sides, and plenty of room. As a rare exception, the floor had been well swept; but there was no closet attached to the premises, and the workpeople had to borrow the key of a closet belonging to the owner of a neighbouring public-house. This, especially for the women who work here, is particularly unpleasant. Assuredly tenements, however suitable in other respects, should not be let out as workshops unless there is proper watercloset accommodation. Another sweater who employed twelve men and women, had a very dirty closet, with the flushing apparatus out of order. There was no back entrance to his premises, so the dust had to be taken out through the house, and altogether the aspect of the place was very uninviting. Finally, we came upon what might be described as an international sweating den; this was a very small dwelling-house; cooking, sleeping, and tailoring were all provided for in the same room. One of the women had just come from Jerusalem, which she described as a very poor place for business. Some of the men had arrived from Egypt, and they all spoke Italian. They were engaged affixing magnificent gold braid on a naval uniform, and all seemed quite innocent of any sense of responsibility concerning the sanitary condition of their dwelling-house and work-place. Such, briefly, were the chief characteristics of the three categories of tailors' workshops we visited at Liverpool.

(To be continued.)

Pharmacology and Therapeutics.

ACETANILIDE-MONOBROMO.

MESSRS. BURGOYNE, BURBRIDGES, AND CO. have prepared a combination of antifebrine or acetanilide with bromine, which it is suggested may prove useful in facial neuralgia when the pains in the head are linked to nerve alterations; also in rheumatic, muscular, and articular pains. The name given to the compound is acetanilide-monobromo, and its formula is $(C_6H_4BrN{<}^{CO_2CH_3}_{H})$.

LANOLINE COLD CREAM.

This is a very cleanly and elegant preparation, manufactured at the Lanoline Works of Benno Jaffé and Darmstaedter, Martinikenfelde, near Berlin. Messrs. Burroughs, Wellcome, and Co., of Snow-hill Buildings, are the sole proprietors in Great Britain, India, and the British Colonies. This cold cream is very suitable for inunction. We have tried it in cases of chapped hands, in mild cases of limited pityriasis, and in the treatment of scarlet fever, rubbing the scented preparation into the palms of the hands and soles of the feet. The effects were decidedly satisfactory, and certainly the employment of this cold cream is less objectionable in some respects than neat's-foot oil and some other ointments.

GREEN'S HYPODERMIC SOLUTIONS.

We have clinically tested the hypodermic solutions of morphine and of ergotine sent to us by Messrs. Charles Green and Co., Tower Chambers, Moorgate-street, E.C. The solutions have an excellently clear appearance, and are neutral in reaction. Their clinical effects were all that could be desired. The strength of the morphine solution kept in dusky green glass bottles is one grain of the alkaloid in twelve minims, of the ergotine one grain in three minims. No local abcesses or serious induration followed their employment. The solutions are free from acid and spirit, and are preserved by an antiseptic hydrocarbon.

ADULTERATION OF GLYCERINE.

The *Monthly Magazine of Pharmacy* learns that a fraudulent admixture of chloride of magnesium with glycerine has been resorted to rather extensively in France, as it is said "to cheapen the product." Of course the presence of such a salt in glycerine, even in the smallest quantities, would render the latter perfectly worthless for medical use. Yet M. J. Révol, a pharmacist and analytical chemist, asserts that this abominable practice appears to be prevalent on a somewhat extensive scale in certain parts of France. The specimens he himself examined contained 44 and 56 per cent. of magnesium chloride. The only explanation we can conceive of these extraordinary revelations is that the mixture in question has been expressly made for industrial purposes, gas meters, engines, &c., as was the case in America some time ago, and that by some unaccountable accident the product finds its way into pharmacy, for which it was never intended. It is evident that such mixtures should be sold under other names, or with their composition indicated on the jars or bottles. It is always somewhat difficult to obtain glycerine of absolute purity, and a sample which to all appearance is pure enough is frequently found to cause severe smarting when applied to the mucous membrane, and of course any adulteration of chloride of magnesium, or, what is more common, of oxalic or formic acid, would render the glycerine highly unsuitable for the purpose of injecting into the rectum for producing an evacuation of the bowels, as has lately been recommended.

CASCARA SAGRADA.

Some interesting pharmaceutical facts on cascara sagrada are communicated by Messrs. H. F. Meier and J. Le Roy Webber to the *Pharmaceutical Journal* (No. 926). The active principles—the resins of cascara—are not bitter, and form soluble compounds with the alkalies and alkaline earths. The glucoside, though the parent or source of the bitter tonic principle, is itself devoid of bitterness. The glucoside is capable of undergoing decomposition in the normal gastric juice of the stomach, with the development of the bitter principle there. It is thus possible to prepare a comparatively tasteless product from cascara which shall contain the laxative and tonic virtues of the drug. A ferment, belonging to the class of unorganised and soluble ferments like diastase, pectase, pepsin, papayine, &c., has been discovered in cascara. The brown resin is present to a much larger extent in aged than fresh bark, and seems to possess the greatest laxative power. The ferment seems to be identical with that existing in numerous other vegetable substances, such as cabbage, liquorice root, frangula, &c.

SUBSTITUTES FOR CANTHARIDES.

Mr. O. Braithwaite publishes in the *American Journal of Pharmacy* an interesting paper on vesicating insects. Two South American species of Mylabris, which belong to the same group (Trachelidæ) of the Coleoptera as cantharides—viz., the M. bifasciata and M. lunata—are unknown to existing manuals of pharmacy or entomology. On being subjected to treatment with acetic ether and sulphide of carbon they were found to yield 1·02 and 0·29 of cantharidine; so that the former species is about twice as rich in cantharidine as the ordinary Cantharis vesicatoria.

A NEW SOURCE FOR CITRIC ACID.

A Russian chemist, Gn. P. Kossovich, has recently proposed to use the cranberry or Oxycoccus palustris as a source of citric acid. The amount of the acid contained in the cranberry appears from his investigations to be about 2½ per cent. of the total weight, so that a large quantity of the plant must be utilised for a very small yield of the acid. However, the cranberry grows wild in vast quantities in some parts of Russia, so that it is quite possible that the proposed plan may be commercially practicable. In addition to the medicinal uses of citric acid, it is largely employed by dyers, for whose purposes it is suggested that the juice of the cranberries might be utilised in its fresh condition, instead of the concentrated lemon juice, which now has to be obtained from Italy.

GUY'S HOSPITAL MEDICAL SCHOOL.—The Michael Harris prize in Anatomy, value £10, has been awarded to Mr. J. H. Bryant, of Ilminster; the Beaney prize in Pathology, value 30 guineas, to Mr. E. H. Starling, of Bombay; and the Golding Bird prize for Diagnosis, value 33 guineas, to Mr. R. D. Mothersole, of Colchester.

NATIONAL PENSION FUND FOR NURSES.

WE commented last week upon the prospectus which has just been issued of this new Society, and found occasion in doing so to remark on what seem to us to be very serious shortcomings in the scheme. We have received in answer to our criticisms a very long communication, which purports to set forth the views of the managers of the Society, but amounts in substance to a counter criticism upon our critique. It thus becomes necessary that we should recur to the subject, and we are the better pleased to do so because an opportunity is thus afforded of correcting a misprint, which, although it makes no difference to the substance of what we said, might incidentally produce a false impression. After stating that an annuity such as the prospectus of the new fund offers—an annuity, that is, of £15 a year to be entered upon at sixty years of age—could be obtained in the "open market" by a proposer in her twentieth year for an annual premium of £1 10*s.* 5*d.*, we brought this into comparison with the corresponding premium chargeable under the Pension Fund table—namely, £1 18*s.* 8*d.* a year. The difference between these two premiums is 8*s.* 3*d.*,—equal, that is, to an addition of 27 per cent. upon the "open market" rate. In allusion to this point, we wrote: "It is true that the promoters of the Pension Fund express a hope that in the case of a pension to be entered upon at sixty years of age the amount will be actually increased to £26 in place of the nominal sum of £15, but it is a very bold thing to ask a policyholder to speculate on a vague promise of that sort to the extent of adding 37 per cent. to her annual premium." The typographical error of 37 for 27 here was unfortunate, as it involved an exaggeration of the point that we were making. But had we been disposed to press objection to the table, it might have been made stronger than even the misprint would represent. For in a foot-note to the Pension Fund table the reader is informed, as above stated, that the projectors hope to pay an annuity of £26 upon a contract for an annuity of £15. Now for this expectation there either is or there is not very good ground. If not, it is unpardonable to suggest such a hope. But, for our own part, we believe that there is good ground for the expectation. Then why understate the benefit so absurdly? The promoters resent our saying that their offer is 27 per cent. below the open market, but upon their own showing they are promising what is less, not by 27 per cent., not even by 37 per cent., but actually by 60 per cent., than the sum which there is a reasonable prospect of their being able to pay. This is not caution. It can hardly be accounted over-caution; for it is absurd to suppose that even the most cautious actuary dares not pledge himself, or even thinks it undesirable to pledge himself, within a margin of 60 per cent. We can only suppose that it is done in order that hereafter the managers of the Fund may have the opportunity of saying, "See how much our performance has gone beyond our liability, how it has even exceeded your most extravagant expectations." Such things are done every day by competitive insurance companies of various kinds. It is quite a trick of the trade to take a surplus pound by way of premium and restore fifteen shillings of it to its delighted owner by way of bonus. The artifice is highly popular and makes a splendid advertisement. It is mere *finesse*, but a section of the public accounts it finance. From all such surroundings it seems to us that a scheme launched under such auspices as the National Pension Fund ought to be scrupulously free. It should be the object of its managers to give to their policyholders the fullest and most exact information possible, and to pledge themselves to as large a return upon the premiums entrusted to them as sober caution will permit.

But this point about the rate of premium, though a serious one, is, in our judgment, the least fault which we find in the prospectus. Much more serious is the adoption of all kinds of needless restrictions and limitations. In the first place, we find no adequate provision in the scheme for the payment of an equitable surrender value in lieu of benefits to a retiring member. Thus, the abstract of regulations as regards pensions provides that, "on giving up the occupation of nursing, subscribers may continue their contributions to the Annuity Fund or withdraw, taking out the money they have paid in for pensions, if returnable, as they prefer." What is the meaning, we wonder, of the double qualification, "on giving up the occupation of nursing" and "if withdrawable"? Does it mean that a nurse who is not withdrawing from her avocation is only to be allowed to withdraw from the fund on the condition of sacrificing all her interest in it? Or, again, does it mean that under the cheaper tables, which will probably be the more popular, no consideration will in any case be paid for the surrender of prospective claims? We pass to another point. No one "is to be permitted to join the Sickness Fund without at the same time contributing at least three times as much per annum to the Annuity Fund." Why not? Surely a full-grown woman is competent to tell what forms of benefit and in what proportions will be most adapted to her particular needs. The case is easily imaginable in which membership in the Sick Fund without membership in the Annuity Fund is a desideratum. The case is even a common one. A young woman upon whom, for instance, the responsibity of maintaining dependent brothers and sisters, in whole or in part, has fallen, may well say to herself, "I cannot afford to be invalided, but there is no hurry about my provision for old age. Five years hence will see my brothers self-supporting, and five years hence will afford me ample time to invest for a pension. But the provision against sickness is a thing for to-day; that must be made at once." And she would be quite right, as she would be also in adopting the same course in a hundred-and-one other contingencies. But for such a case the Pension Fund affords no opportunity. To the most deserving case that can be suggested its doors are closed by an inflexible and arbitrary rule that participators in its benefit must take all or leave all, according to the arrangement of the promoters.

Yet one other point. The Sick Fund benefits are rigidly limited to "certificated trained nurses, or persons attached to recognised hospitals or nursing institutions." A rule of this sort in the case of the Annuity Fund, dependent to some considerable extent upon adventitious help, is quite intelligible. It would be obvious to remark that in that case the admission of strangers would divert these benefits from their intended destination. But there is no great prospect of bonus on the sick-pay scheme, and if there were it would take such a form as might easily be limited to a privileged class of members, so that the only way in which outsiders could obtain an undue proportion of sick pay would be by introducing an excessive proportion of qualifying sickness. On what does the apprehension of such a result rest? It is a large part of the nobility of the nurse's profession that she makes a considerable sacrifice, not only of ease, but actually of health, in the pursuit of her vocation. Her arduous duties, her prolonged vigilance, and her constant contact with whatever disease is abroad, rob her only too surely of the prospect of uninterrupted health, be her constitution what it may. The admission of able-bodied women of almost any other class would tend rather to diminish than to increase the pressure of sick benefit upon the Fund. But, be the merits of this provision what they may, the objections above noticed—a mere sample and selection of objections, after all—must surely convince all well-wishers of the present movement that it would be wise to withdraw the prospectus, which has been, we cannot help thinking, incautiously made public, and to prepare a revised scheme in consultation with those who know what nurses want, and can not only conjure with figures, but also understand the flesh-and-blood facts of the case.

WESTMINSTER HOSPITAL.

INAUGURAL MEETING OF THE GUTHRIE SOCIETY.

THE long-felt want of a students' medical debating society has been recently supplied by the formation of the Guthrie Society (so named after the late Mr. Guthrie, a former surgeon to the hospital), the objects of which are the encouragement and promotion of interest in the study of medicine and allied sciences, together with affording its members opportunities of practice in the art of public speaking by debate, and also of establishing a bond of union between members of the staff and past and present students. It is proposed that the meetings of the society shall include the reading of papers—clinical and pathological, evenings for the exhibition and discussion of

interesting cases and specimens, and social reunions for members and friends. Among its especial advantages, the society will possess histological, pathological, and osteological collections for the use of members. It will be also in connexion with Messrs. H. K. Lewis's circulating library of medical and scientific works. We understand that the society already numbers over a hundred members. The inaugural meeting was recently held at the Westminster Hospital Medical School, Caxton-street, when there was a large attendance of students and members of the staff. The chair was taken by Dr. Octavius Sturges, (president of the society), who, in giving the inaugural address, wished for the society such success as it deserved. He explained some of the objects the association had in view, and thanked the members for the honour they had done him by electing him as their first president. Mr. Chas. Stonham, F.R.C.S. (vice-president), to whose energies may in large measure be attributed the formation of the society, gave some details as to its proposed working, after which the meeting resolved itself into one of social intercourse.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Barnsley Rural District.—During 1887 the death-rate for this district was 20·6 per 1000, and the infantile rate reached 180·4 per 1000 registered births. Both these rates must be regarded as excessive. Of the infectious diseases that were heard of, there were 224 cases of scarlet fever and 55 of enteric fever, 19 of the latter having occurred in Roystone, where the well has now been made free from the risk of sewage pollution. Occurrences of the same disease elsewhere seem to point to the defective system of excrement and refuse disposal as a cause. The attempts to stay the spread of scarlatina were to a large extent frustrated by the absence of any means of hospital isolation; and Dr. Sadler's advice as to combined action in this respect between the Barnsley Urban and Rural Districts was at the time not followed. Small-pox, however, had a different effect, and the two authorities, fearing an extension of that disease, came to an arrangement by which the various authorities within the union obtained power temporarily to provide accommodation on the vacant land belonging to the urban hospital. The district, as a whole, is fairly provided with sewers, but means of sewage disposal are faulty, and in some places nuisance from sewage ditches remains. Most populous localities have also a good water supply; but Roystone, which has already suffered from its local wells, is not satisfactorily provided for in this respect.

Carlisle Urban District.—Mr. Brown gives an excellent illustration of the value of having in readiness for use a suitable hospital for infectious diseases. In April last typhus was imported into Carlisle by means of a patient who had been travelling in West Cumberland, where the disease was then prevalent, and within a few days nine cases were heard of in four houses. Immediate removal to hospital was effected, and only one further attack occurred of this highly infectious fever. In this way the beginning of what might otherwise have been a serious calamity was at once effectually dealt with. Mr. Brown also gives an account of an interesting investigation into the circumstances of an outbreak of typhoid fever associated with a milk supply. The annual report is thus largely made up of disease occurrences to which are added detailed statistics, but there is no reason to believe that current sanitary improvements of the district have been otherwise than steadily maintained. The general death-rate for 1887 was 19·4 per 1000.

Doncaster Rural and Combined Districts.—This combination, for which Dr. Mitchell Wilson acts as medical officer of health, serves four rural and three urban districts, and during the year 1887 the general death-rates varied from 16·0 per 1000 in Tickhill Urban to 20·2 in Selby Rural Districts. Referring to the prevailing drought and the influence which a resulting deterioration in the water service might have had on such a disease as enteric fever, Dr. Wilson points out that the rate of death from that disease has been very decidedly less than the corresponding decennial average rate for England and Wales. The widespread prevalence of small-pox in the West Riding has turned the attention of several authorities in the combination to the need for isolation hospitals, and Dr. Wilson takes the opportunity of urging them not to let the present anxiety pass without something being done by way of providing small local hospitals for the isolation of the current infectious fevers, which are constantly present, and which cause a far greater mortality than does small-pox. Following on a short general report, each district is dealt with separately; and in the account given of the Selby rural area there is included a very complete report on the need for a proper water supply for Cawood, a subject that has been under consideration since 1874. A similar difficulty arises in other districts, and Dr. Wilson's reports show more and more the danger of trusting for a supply to local and comparatively shallow wells, which must from time to time be cleansed, a remedy which does not get rid of the initial danger resulting from their being sunk in a soil liable to contamination. Some excellent work is, however, in progress, and the authorities have the advantage of skilled and sound advice.

Hanley Urban District.—Estimating the population of this district as best he can under its varying circumstances, Dr. J. Swift Walker gives the death-rate for 1887 as 19·0 per 1000. The infants under one year of age died at the rate of 184 per 1000 registered births; but, high as this rate is, we are told that it is below any corresponding rate recorded since 1881. With regard to the zymotic affections, a considerable diminution in fatality is reported; and in this connexion the value of the sanitary inspections as now carried out, and of the notification system, are adverted to. The latter system has been in operation for two years, and this without any known drawback. Unfortunately, we find no reference to isolation in hospital; if this means that no hospital is available, we can only fear that the diminution in amount of infectious disease may turn out to be in part a temporary improvement only. We fully recognise the important influence of improved sanitary administration, which is promoted by an early knowledge of infectious diseases, but we are none the less convinced that an authority which obtains this knowledge compulsorily under an Act of Parliament has a further duty towards the public in providing one of the most obvious and essential means for staying the spread of the diseases in question. In other respects good work is in progress, and amongst the measures adopted is the abolition of privies and cesspools. The substitute in this district is Fowler's closet, as to which a detailed report would be interesting, for, if constructed as it used to be, the lack of efficient means of flushing has appeared to many to constitute a serious drawback.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5766 births and 3584 deaths were registered during the week ending April 7th. The annual rate of mortality in these towns, which had been 20·3, 21·1, and 21·5, per 1000 in the preceding three weeks, declined last week to 19·9, a lower rate than has prevailed in any previous week of this year. During the thirteen weeks of last quarter the death-rate in these towns averaged 22·1 per 1000, and was 1·9 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 13·6 in Derby, 14·8 in Brighton, and 15·0 in Sunderland and in Halifax. The rates ranged upwards in the other towns to 23·5 in Plymouth, 23·7 in Salford, 28·1 in Blackburn, and 29·7 in Manchester. The deaths referred to the principal zymotic diseases, which had been 319 and 388 in the previous two weeks, declined again last week to 371; they included 141 from whooping-cough, 51 from "fever" (principally enteric), 48 from measles, 46 from scarlet fever, 41 from diarrhœa, 27 from diphtheria, and 17 from small-pox. No death from any of these zymotic diseases was registered last week in Sunderland; whereas they caused the highest death-rates in Blackburn, Salford, and Plymouth. The greatest mortality from whooping-cough occurred in Manchester, Liverpool, London, and Salford; from "fever" in Preston, Leicester, and Nottingham; from measles in Derby and Plymouth; and from scarlet fever in Halifax and Blackburn. The 27 deaths from diph-

theria in the twenty-eight towns included 16 in London, 3 in Birmingham, and 3 in Salford. Small-pox caused 14 deaths in Sheffield, 1 in Manchester, 1 in Halifax, and 1 in Leeds, but not one in London or in any of the twenty-three other large provincial towns. The Metropolitan Asylum Hospital Ships contained only 8 small-pox patients at the end of last week, against 15 and 9 on the preceding two Saturdays; the Highgate Small-pox Hospital contained 1 patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1119 on Saturday last, against numbers declining steadily in the preceding eighteen weeks from 2764 to 1171; the 71 cases admitted to these hospitals during the week also showed a further decline from recent weekly numbers. The deaths referred to diseases of the respiratory organs in London, which had ranged in the preceding four weeks from 490 to 457, declined last week to 419, and corresponded with the corrected average. The causes of 93 or 2·6 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Wolverhampton, Birkenhead, and Derby; the largest proportions of uncertified deaths were registered in Hull, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·0, 22·2, and 23·7 per 1000 in the preceding three weeks, declined again to 21·8 in the week ending April 7th; this rate exceeded, however, by 1·9 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 11·2 and 16·9 in Leith and Greenock, to 24·3 in Glasgow and 26·1 in Aberdeen. The 551 deaths in the eight towns showed a decline of 48 from the numbers returned in the previous week, and included 26 which were referred to whooping-cough, 10 to measles, 5 to "fever" (typhus, enteric, or ill-defined), 4 to diphtheria, 3 to scarlet fever, 3 to diarrhœa, and not one to small-pox; in all, 51 deaths resulted from these principal zymotic diseases, against numbers declining from 76 to 45 in the preceding four weeks. These 51 deaths were equal to an annual rate of 2·0 per 1000, which was 0·1 below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 21 and 17 in the preceding two weeks, rose last week to 26, and included 15 in Glasgow, 4 in Aberdeen, 4 in Paisley, and 2 in Edinburgh. The 10 deaths from measles, of which 5 occurred in Edinburgh and 4 in Glasgow, showed an increase of 6 upon the number in the previous week. The 5 deaths referred to "fever" corresponded with the number in the previous week; while the fatal cases of scarlet fever, diphtheria, and diarrhœa showed a decline from recent weekly numbers. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 137 and 144 in the preceding two weeks, were last week 142, and exceeded the number returned in the corresponding week of last year by 32. The causes of 74, or more than 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·0, 29·7, and 31·2 per 1000 in the preceding three weeks, declined to 27·8 in the week ending April 7th. During the thirteen weeks of last quarter the death-rate in the city averaged 31·6 per 1000, the mean rate during the same period being 22·0 in London and 22·1 in Edinburgh. The 188 deaths in Dublin showed a decline of 23 from the number returned in the previous week; they included 6 from "fever," 5 from measles, 4 from whooping-cough, 3 from scarlet fever, 1 from diarrhœa, and not one either from small-pox or diphtheria. Thus the deaths referred to these principal zymotic diseases, which had been 20 and 15 in the preceding two weeks, rose again last week to 19; they were equal to an annual rate of 2·8 per 1000, the rate from the same diseases being 2·2 in London and 2·0 in Edinburgh. The 6 deaths referred to "fever" showed an increase of 5 upon the number in the previous week, and the fatal cases of measles and scarlet fever also showed an increase; the deaths from whooping-cough, on the other hand, which had been 4 and 8 in the previous two weeks, declined again last week to 4. The deaths both of infants and of elderly persons showed a considerable decline from the numbers in recent weeks. Four inquest cases and 3 deaths from violence were registered; and 63, or more than a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

WAR OFFICE.—Scots Guards: Surgeon H. M. Ramsay Medical Staff, to be Surgeon, vice G. S. Robinson, promoted.

ARMY MEDICAL STAFF.—Deputy Surgeon-General Robt. Walter Clifton is granted retired pay.

INDIAN MEDICAL SERVICE.—Surgeon-Major A. Barry, M.D., F.R.C.S., Indian Medical Service, has been promoted to be Brigade Surgeon.

ADMIRALTY. — The following appointments have been made:—Staff Surgeon Henry L. Crocker, to the *Caryafort:* Staff Surgeon L. T. Colthurst, to the *Scout*; Staff Surgeon J. T. W. S. Kellard, to the *Mutine;* Staff Surgeon R. F. Yeo, to the *Hyacinth;* and Staff Surgeon G. S. Smith to the *Kingfisher*, reappointed on promotion (dated March 1st, 1888).

Correspondence.

"Audi alteram partem."

CONSTRUCTION OF INFECTIOUS HOSPITALS.

To the Editors of THE LANCET.

SIRS,—Dr. Collie contributes a short note on the above subject, which is so important to the public health, and which is now being discussed in your columns. But we should like to have heard more from him. His experience in the medical management of infectious hospitals is almost unequalled. What is his opinion with regard to the alleged difficulty in properly disinfecting the wards of permanent hospitals? At the old London Fever Hospital all kinds of infectious diseases, except small-pox, were received, and at our Metropolitan Asylums Board hospitals, which have been in use for nearly twenty years for different purposes, many opportunities must have occurred for noticing the efficacy of disinfection. Dr. Whitelegge, in his able letter last week, explained very clearly the advantages of a permanent over a temporary hospital for a town the size of Nottingham, where a suitable site has been obtained. There was one point, however, on which I think he might have laid more stress. One of the great disadvantages in temporary hospitals, as they have been erected, is the ineffectual separation of infectious diseases of different kinds. It is not an inherent disadvantage; but to provide against it as efficiently as is done in permanent hospitals would no doubt considerably increase the cost of the temporary establishments. The notification of infectious diseases may become a powerful means for controlling their spread. But a sanitary authority which has armed itself with this preventive measure has incurred an obvious responsibility, and that is to provide comfortable hospital accommodation, where individuals, whom it is necessary to isolate for the public good, are not exposed to any avoidable risks.

I am, Sirs, your obedient servant,

EDWARD SEATON.

George-street, Hanover-square, April 7th, 1888.

SPRING BOUGIES OR ANTROPHORES IN THE TREATMENT OF GONORRHŒA.

To the Editors of THE LANCET.

SIRS,—In your issue of March 24th you draw attention to the use of antrophores or spring bougies, as they are called in England, in the treatment of gonorrhœa, and detail the experience of Dr. Lohnstein on the subject. As I have had the spring bougies in constant use for intractable gleet for six months, it may perhaps not be unacceptable to your readers to have partial confirmation of Dr. Lohnstein's statements as to their efficacy.

Specimens of the bougie were sent to me last October by

Messrs. T. Christy and Co., with a request to give them a fair trial. Finding them of use in one or two cases of chronic gleet, I wrote asking for a further supply, and thereupon this firm very generously placed at my disposal sufficient to treat 100 cases of gleet. I started to work empirically, treating all varieties of non-strictural gleet with it. I soon obtained sufficient knowledge to limit the use of the spring bougies to cases of mild urethritis and chronic gleet, and to employ only those bougies which were made of 5 per cent. of thallin. One or two serious objections to their original form were easily overcome. There was a danger of the entire bougie slipping into the urethra out of control, for the bougies were fitted with a little ring, which could be easily swallowed by the meatus. In one case a man thrust the bougie so energetically into the urethra that I had to hook it out for him. The recurrence of so serious an accident has been guarded against by employing a much larger ring. The second objection was the great pain sometimes caused by the bougie; this was also obviated by coating the outside with cocaine, or by using 2½ per cent. instead of 5 per cent. of thallin. The results of this method have been very successful in my hands. Eighty cases of chronic gleet, one fourteen and a half years', some seven and a half years' and most of two years' duration were taken, and of these a large percentage were cured, the rapidity of the cure varying from three to five weeks.

A certain small proportion were made worse and some remained quite unaffected by the treatment. The reason for the former bad results would appear to be the existence of a granular patch or patches instead of a generally inflamed condition of the urethra. These cases were subsequently treated after examination with the incandescent lamp urethroscope by direct local application. Some of the cases remaining unaffected was proved to be due to the seat of the disease being deeper than the bougie had reached—being, in fact, in the prostato-membranous sections of the canal.

The medicated bougie is the best I have ever met with; its pliancy permits of its ready adaptation to the curves of the urethra, and its firmness allows of its easy introduction. I have regarded the bougie as a most efficient, "solid," adhesive injection, and experience tends to prove what bacteriologists have demonstrated—viz., that thallin is fatal to the gonococcus. I have never used the spring bougie, nor can I advise its employment, in acute gonorrhœa. I have never seen any complications arise from their use, such as orchitis, cystitis, suburethral abscess, &c. This is perhaps due to the bougie being under more perfect control than an ordinary injection.

I remain, Sirs, yours truly,

Old Burlington-street, April 6th, 1888. E. HURRY FENWICK.

PROPOSED CHANGE IN THE PRACTITIONERS' EXAMINATION AT ST. ANDREWS.

To the Editors of THE LANCET.

SIRS,—About four years ago you were kind enough to afford space in your valuable journal for the discussion on certain proposed alterations in the method of admission to the practitioners' examination for the degree of M.D. in the University of St. Andrews. It had been felt for a long time that to require candidates to be forty years of age before they were allowed to present themselves for the examination was to postpone it until a time of life when its possession had become of comparatively little use, and that men who had managed to get along without the possession of the degree so long had often made up their minds to do without it altogether.

Up to the time of this movement, which resulted in a numerously signed petition being presented to the Senate of St. Andrews, no steps, as far as I am aware, had ever been taken towards removing the hardship experienced by London and provincial students who had passed their curriculum at a medical school not connected with a University in not being able to obtain a degree upon similar conditions to those of students at Newcastle or at the Scotch Universities. The only open degrees are those of the London University, which are of such a high standard as to be practically unattainable by any except the specially gifted. Since this time, however, the Royal Colleges have become alive to the importance of the subject, and have formulated a scheme of their own for obtaining power to grant the degree of M.D.; then there is the movement for promoting the formation of a Teaching University for London; and, not to be behind the times, the Scotch Colleges are seeking similar powers to those desired by their London sisters. None of these schemes are, however, altogether satisfactory, and have little chance of becoming the law. The Scottish Universities Bill will be shortly brought before Parliament, and I have information (which, however, I am not at liberty to make public) which enables me to say that the University of St. Andrews will not oppose a scheme for enabling it to grant the degree of M.D. to registered men of ten years' standing, without reference to age or place of study, provided it be shown that sufficient interest is taken in the matter and a considerable number of men desire to take advantage of the concession. I shall be glad, therefore, if all who are in favour of this movement will send their names to me as soon as possible. The number of Englishmen going abroad for degrees certifies to the want of a University which will grant its degrees upon reasonable terms at home. It has been said by some objectors to our proposals that we are seeking to make the acquisition of a degree too cheap, and that if any scheme of this kind be brought into practice there will be no credit attached to the possession of such a title. To this we reply that we do not desire to lower the standard of medical education at all; on the contrary, we are willing to submit to any examination that may be prescribed;—but that we do object, and very strongly and very properly too, to the unfair advantages which degree-granting bodies possess over the licensing corporations; that we object to the system which gives two unequal titles to the students of the same curriculum, and after passing equally difficult examinations. If the Universities would allow men who have conformed to the requirements of the Medical Council and themselves to go in for their degrees, then we should hear nothing more of dissatisfaction; the best schools would get the largest number of students, who would take the University of their choice, as they do now their College or Hall; but until this is brought to pass dissatisfaction and injustice will exist, and the aggrieved ones will try to obtain redress.

Some may suggest that if there is to be a change, let it be a radical one, and let the age limit be abolished altogether, and allow any qualified man to go in for the degree. There are several objections to this proposal, one of which is that it is very unlikely that the University itself would support it, and, again, that other Universities would probably object as well. Then, also, we must look to the reasons which have caused a limit to be fixed at all: the increased fee, and the restrictions as to the time and age at which the doctorate is conferred upon those who have not resided at St. Andrews, are in the nature of penalties for the omission, and also are no doubt intended to protect the interests of the University by causing students to flock there instead of elsewhere; and whilst we may well ask that these penalties shall not be so great as to be practically prohibitory, we can scarcely expect that they will be removed altogether.

I hope all those who have felt the injustice of the present system will unite to try to obtain this small measure of reform, and use their influence with their representatives in Parliament to bring it about. Sheets for obtaining signatures are ready, and I shall be glad to forward them to all applicants; and may I ask that both those who desire this change now for themselves, and also that those who are not yet of sufficient standing to take advantage of it, will sign the memorial. I am, Sirs, your obedient servant,

Leigh, Lancashire, March 26th, 1888. B. JONES.

CORONERS AND THE NEW COUNTY COUNCILS.

To the Editors of THE LANCET.

SIRS,—Fully agreeing with your leading article as to the appointment of coroners by the new County Councils, I am writing to-day to the member for my borough, pointing out that it only needs the insertion of the words "county coroner or coroners" in the Local Government Bill now before the House of Commons (Clause 3, Section 11) to make clear what appears to be the intention of that clause—viz., that all officers whose salary is paid out of the county rate (except clerks of the peace and justices' clerks) should be appointed by the County Council. By Section 12 the new councils are authorised to pay the salary of any coroner whose salary is payable out of the county rate, and to divide the county into coroners' districts, and it would surely be insufferable

that they should be deemed unworthy to elect their own coroner. I trust all your readers will exert their influence with members of Parliament to get these words inserted in the Local Government Bill, and so defeat the Lord Chancellor's effort to transfer the appointment of coroners to himself.

I am, Sirs, faithfully yours,

Dulwich-grove, S.E., April 10th, 1888. H. NELSON HARDY.

TENOTOMY AND RAPID REDUCTION OF DEFORMITY.

To the Editors of THE LANCET.

SIRS,—I think that now, when the subject of tenotomy and rapid reduction of deformity in cases of talipes varus and valgus is being discussed in THE LANCET, it may not be out of place to refer to an operation described by me in the same journal for Jan. 2nd, 1886—viz, the division of the bones, which are the tissues really at fault, by means of the chain saw. I continue to practise this operation with good and rapid results. I have performed it in several cases that had been unsuccessfully treated by division of tendons.

The advantage of division of the bones is that the tissues actually at fault are attacked, for we know that if all the soft structures are removed from the bones in these cases the bones remain in the position of deformity. I enclose a photograph of the result of an operation for extreme valgus. The patient, after I had done one foot, returned to have the same operation performed on the other.

I am, Sirs, yours faithfully,

H. P. SYMONDS, F.R.C.S.E.,

Lichfield Lecturer in Surgery in the University of Oxford.

Oxford, March 14th, 1888.

DISLOCATION OF THE HEAD OF THE FIBULA.

To the Editors of THE LANCET.

SIRS,—The case of dislocation of the head of the fibula contributed by Mr. Ashley Leggatt in last week's number is very interesting. It is unquestionably a very rare form of luxation, and the details of the case show very distinctly how it is produced. I think, however, he is mistaken as to the share the action of the biceps had in its reduction. In a case which I saw a long time ago, and which will be found related in THE LANCET of March 30th, 1850, p. 385, the action of the biceps seemed to be the chief hindrance to the reduction, as, when that muscle was relaxed by flexing the leg upon the thigh, the pressure of the fingers, which previously to that being done was quite ineffectual, immediately caused the head of the fibula to slip back into its place.—Yours faithfully,

Glasgow, April 6th, 1888. HUGH THOMSON, M.D.

PEMBROKESHIRE AND HAVERFORDWEST INFIRMARY.—The report presented to the members and subscribers at the annual meeting, held a few days since, showed that the efficiency of the institution had been maintained. There were 61 in-door patients treated during the past year, and 1331 out-patients—an increase of 165 on the previous year. The receipts and disbursements, as compared with the previous year, were satisfactory—the former exhibiting on the whole a large addition, while in the latter, there was a decrease, notwithstanding the increased number of in-door patients.

THE QUEEN IN FLORENCE.

(From our own Correspondent.)

April 9th.

IN a distich that may yet become historical, a local rhymster has thus described the "social situation":—

"Non si fa passo la gente Florentina
Senza incontrare un Re o una Regina."[1]

For the moment, indeed, Florence is the centre of high life, and comports herself with a self-possession and a dignity that have impressed her august visitors most favourably. So touched has Her Britannic Majesty been with the respect shown to her understood wishes for privacy, that she caused it to be known on a recent occasion that she would appear with her suite in public both in the Cascine (the Hyde-park of Florence) and in the main streets that run round the city. This kindly relaxation of her *incognito* was quite appreciated by the Florentines, and when the Queen with her retinue drove at an easy pace through the great pleasure resorts and business thoroughfares on the day appointed, Florence gave herself a holiday, and turned out in her thousands to show her sense of the cordial good-will she had inspired in her illustrious guest. Then, as indeed on nearly every day of Her Majesty's sojourn, the weather was delightfully vernal; and though we have had showers and a visitation in force of the *libeccio*, or south-west wind, the balance of fine days, out of the sum total, has really been considerable. That the *villeggiatura* on the Fissole slopes, and the frequent visits to the architectural, pictorial, and plastic *chefs d'œuvres* in which Florence abounds, have done her Majesty all the good that was anticipated is apparent to everyone who has the pleasure of seeing her; indeed, her activity, mental and physical, has been such as to test the "staying power" of more than one member of her suite. The lovely rural surroundings of the Villa Palmieri have also proved very attractive to the Queen, and, just as on the banks of the Lago Maggiore nine years ago, Her Majesty takes special pleasure in greeting the simple country-folk, and interesting herself in their ways and in their work. The other morning she found, in a field near the villa, two little girls picking violets, and after some kind conversation with them she presented each of them with a sovereign, whereupon the delighted pair lost no time in running home and telling their mothers that the "Regina d' Inghilterra" had "given them a gilt medal with her likeness on it"—a valuation of the gift which, we may presume, they were not long permitted to entertain.

The health of the city continues excellent, and the vigilance of the *nettezza pubblica* is being maintained with a steadiness which it is to be hoped will not be allowed to relapse altogether into the traditional negligence. Florence has now had some experience of what cleanliness means; and if she desires to preserve, or rather to enhance, her attractions for the "northern civilisation," she could not do better than keep up or improve upon the sanitary measures she has initiated in honour of the Queen of Great Britain.

LIVERPOOL.

(From our own Correspondent.)

THE WEATHER AND THE WATER SUPPLY.

THE weather still remains very cold for this time of the year, and easterly winds prevail. But there is little rain, which, with our deficient water supply, compels the authorities to continue the short service of water, much to the inconvenience of all classes. Efforts are being made to obtain a temporary supply, and next year it is hoped that the Vyrnwy scheme will be complete.

LIFE ON A DOCK BARGE.

An inquest was recently held by the city coroner on the body of a boy aged ten years, who was the son of a widower and lived on board a barge for three weeks before his death without once going off it. The deceased and two sisters of his were taken ill on a Saturday, and by the advice of a

[1] "The Florentine folk cannot step abroad without encountering a King or a Queen."

doctor were removed to the Infirmary for Children, but the deceased was found to be dead on his arrival there, and another of the children died soon after from pneumonia. Although very clean, the barge was not a suitable place for a family of five to live in, and the jury, while they found a verdict of death from natural causes, expressed an opinion that death had been accelerated by unsuitable and inadequate accommodation on the barge.

THE LATE REV. CHARLES BEARD.

The death of the Rev. Charles Beard, the well-known Unitarian minister of this city, has caused much regret in all circles. The deceased gentleman was a warm supporter of the local hospitals, and for some years before the institution of Hospital Sunday he preached in his chapel on their behalf and by his eloquence succeeded in collecting a large sum of money. He was one of the pioneers of the Hospital Sunday movement here, was one of the original members of the committee, and for seventeen years acted as one of the honorary secretaries of the fund.

Liverpool, April 11th.

MANCHESTER.

(From our own Correspondent.)

VICTORIA UNIVERSITY.

AN increasing number of names appear on the periodical list of successful candidates at the half-yearly examinations of the Faculty of Medicine of the Victoria University. At those lately held nine passed the intermediate M.B., eight the first part of the final ditto, and one the second part of the final. Of these, fourteen were students of Owens College and four of University College, Liverpool. No names have yet appeared of students from the Yorkshire College, Leeds, which was the last to be affiliated to the University, but before another year has passed we may expect to see some names from that also. Dr. Sinclair, who, as you have already announced, has been appointed Professor of Obstetrics in the place of Dr. Cullingworth, resigned, has long been known as an active worker at the Southern Hospital for Diseases of Women, and also as a contributor to medical literature of various papers dealing with obstetrical subjects.

HEALTH OF MANCHESTER.

The continued high death-rate of our city has at last attracted attention in the columns of the public press, and at the monthly meeting of the City Council last Wednesday the chairman of the Health Committee made some comments thereon. He stated that as a result of that committee's work the death-rate had been reduced from 32 or 33 per 1000 to 26·4 per 1000 on the average of the past ten years. The Registrar-General gives our death-rate for the last year as 28·7, being the highest of all the English towns, and although this is a little reduced when corrected by local figures, still the fact remains that Manchester has an excessive mortality, even amongst manufacturing towns. Dr. Ransome, Dr. Simpson, and others have lately drawn attention to this excessive loss of life, and urged our health authorities to take further and more energetic steps to mitigate it. The Sanitary Association, or its offshoot, the branch which pays special attention to the prevention of smoke nuisance and air pollution, has done good service in this direction by arranging this winter for a series of lectures by experts showing how much might be accomplished in attacking this one factor of air pollution, though many others are equally at work in producing a polluted condition of soil and atmosphere and dwelling.

SMALL-POX.

At the same Council meeting allusion was made to the precautions being taken to prevent the spread of small-pox. At the request of the corporation no excursion trains were run at Easter-tide between Manchester and Grimsby owing to the prevalence of small-pox at the latter place. A few cases are still met with here weekly as well as in Salford and in the surrounding districts, but nothing approaching any epidemic exists, and the few cases arising are easily dealt with and promptly removed to hospital. In some of the neighbouring towns—notably, Oldham, Ashton, Stalybridge, and Blackburn—a considerable number of cases have occurred during the past few weeks. At Stockport the Sanitary Committee have decided to enlarge their existing hospital for infectious disease in order to be prepared for any emergency. The vexed question of a site for the proposed new fever hospital for Salford is likely to be fought over again. It now appears that there is some clause in the deeds of conveyance of the property at Weaste which the corporation had agreed to purchase which forbids its use for such purpose. It is to be hoped now that the objections which have been urged against the site will be borne in mind, and a locality selected free, at least, from some of the more prominent of these.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester branch of this corps has, in a comparatively short time, arrived at a very high stage of efficiency. Hitherto, however, it had been dependent upon the goodwill of the 1st Manchester Rifles for accommodation, drill ground, &c. A bazaar has been opened by Sir Thomas Crawford, and the patronage and support of the other local volunteer regiments and the leading members of the medical profession have been secured. It is hoped to raise sufficient funds to properly equip and furnish the corps, which numbers 100 members, and ultimately to provide a local habitation for them in the shape of headquarters of their own.

ST. MARY'S HOSPITAL.

At the recent annual meeting of St. Mary's Hospital a very satisfactory report was given of the progress of the movement to rebuild and enlarge the scope of this charity. £20,000 had been promised towards the £30,000 required, and it was thought that the committee might soon be justified in commencing operations for erecting a new building in place of the present unsatisfactory and overcrowded one. By the removal of Dr. Cullingworth to London the hospital has lost one of the most popular members of its staff. Dr. Walter succeeds him, and Dr. Donald has been elected to fill the vacancy thus caused.

April 12th.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

NEWCASTLE.

THE Committee of the Royal Infirmary have passed a vote of thanks to the firm of Armstrong, Mitchell, and Co., for their liberality in giving the proceeds of the admission of the public to view H.M.S. *Victoria* on Easter Monday. The Mayor, in announcing the vote of thanks, stated that the amount received was only a little below £400, and this was the amount I guessed at in my letter last week. The annual meeting of the Eye Infirmary was fixed for last week, and although some routine business was transacted, the meeting was postponed for a month, no doubt owing to the absence of the senior surgeon, Mr. Jeaffreson, whose ill-health was much regretted. Mr. Jeaffreson is one of the many in our ranks who has felt the severity of the winter, and has been compelled to depart south, but it is to be hoped that he may be so far restored by the time fixed for the annual meeting next month as to take part in it, and to resume his professional duties. The appointment of visiting surgeon to the Newcastle Workhouse is to be filled this week, and some of the conditions are onerous, exacting, and absurd. Canvassing is prohibited, but it is very clearly understood that a very active canvass was made in good time by one of the candidates; for instance, when the vacancy took place, but before it was formally declared, many of the guardians had promised their votes. One of the conditions of the contract is that the surgeon is to spend two hours in the workhouse, Sundays included. This is absurd, for in some seasons half an hour will be quite enough to see the patients, and in others two hours might be insufficient. Such a rule should never have been framed. Much sympathy is felt for Mr. Hardcastle, the late surgeon, who held the appointment for over thirty years, and who, owing to the strained relations existing between him and the master, has been compelled to retire when a very few years' more service in the office would have entitled him to a pension.

A TRIBUTE TO DURHAM MINERS.

An inquest was held last week on the body of a miner who was crushed when at work by the fall of a heavy mass of stone. It was shown that the place where the deceased

was working was well known to be specially dangerous and could not be avoided. The coroner said he never saw one of these miners going to work, with his lamp in one hand and his life, so to speak, in the other, without feeling inclined to take off his hat in respect for his bravery, which he considered was of the coolest and highest character.

HOSPITAL SUNDAY AT HARTLEPOOL.

On Sunday the Mayor, Town Clerk, and Corporation formed a procession to church, preceded by several bands. At church a discourse was delivered in aid of the Hartlepool Hospital. It is said that there was a large and attentive congregation.

DEATH OF MR. T. BRADLEY, SURGEON OF ALNWICK.

I regret to record the death, at the advanced age of eighty-seven, of Mr. T. Bradley, the oldest practitioner in Alnwick, which took place on the 6th inst., after a short illness. Mr. Bradley held the office of union district surgeon for the long period of thirty-nine years, and on resigning this office about two months since he only regretted he was unable to complete his fortieth year.

Newcastle-on-Tyne, April 10th.

GLASGOW.

(From our own Correspondent.)

PIT BURIAL.

THE pit-burial nuisance, which was noticed in last week's LANCET, has been investigated and reported upon by Dr. Christie, medical officer of health for the burgh of Hillhead, this being done at the instance of the local authority It seems that "the burial pits at present in use are of the following dimensions—viz., depth, twelve feet; length, seven and a half feet; width, six feet. The pit is dug into from four to six feet of the original soil—a stiff clay,—the upper portion being made-up soil. A layer of coffins is placed on the bottom, and sprinkled over with a little earth, and so on until the pit is filled to about three feet from the surface, when it is covered with about three feet of stiff clay. Each pit when full will contain about thirty-six adult bodies, and about the same number of children, making about seventy for each pit. The pit inspected had been but recently opened, and I observed that from 4 to 4.30 P.M. five interments took place, three being adults and two children. The cemetery was opened in 1863, and since that time the pit-burial system has been in vogue; but at first, and for several years, the pits were much smaller." At the time of inspection no offensive odour could be detected, but the pit seen was a recent one and contained few bodies, while the day was cold. Dr. Christie also failed to connect any of the recorded deaths in the neighbourhood with the insanitary condition of the cemetery. He had no difficulty, however, in certifying that "seventy coffins disposed of within the space mentioned, and covered with three feet of clay, is a nuisance within the meaning of the Public Health (Scotland) Act, and within the meaning of the Burial Grounds Act, and I hereby certify that such a nuisance exists at Dalbeth Cemetery." This report has been sent by the local authority to Archbishop Eyre, as representing the owners of Dalbeth. If the owners do not remove the nuisance, the local authority have power, under the Act, to shut up or regulate a cemetery "conducted in such a manner as to be dangerous to health, or offensive, or contrary to decency." The Roman Catholic Archbishop of Glasgow, as representing the proprietors of Dalbeth Cemetery, has replied to the charges brought in Dr. Christie's report. He denies in general that the pit burial complained of is a nuisance, or that the health of the inmates of the reformatories adjoining the cemetery has suffered, or that the burial pits are malodorous; and resents the selection of Dalbeth Cemetery for special animadversion, as their methods of interment are not substantially different from those of other cemeteries under the jurisdiction of the city of Glasgow and other local authorities. If the last averment is correct, and there is no reason to doubt it, it provides a strong argument for the placing of all cemeteries, both public and private, under proper supervision. Notwithstanding the archbishop's disclaimer, it is satisfactory to learn that his committee are willing to order such regulation in the method of interment in the common ground of the cemetery as they understand to be pointed out in Dr. Christie's report, and have already given instructions to that effect.

This subject seems fairly to have taken hold of the public mind. It was discussed at the last meeting of the Philosophical Society, and a motion was adopted, "that the society memorialise the Secretary for Scotland to take steps for the amendment of the Burials Act, so as to place the private cemetery companies of Scotland under the regulations issued by the Home Secretary for burial grounds under the Burials Act." In the course of the discussion some very startling facts were brought forward by Dr. Eben. Duncan. He stated that in many of the cemeteries round Glasgow the same, or a closely similar, practice to that followed at Dalbeth is daily going on, and has been going on for many years. In Sandymount Cemetery common graves are made to hold five adult coffins, which are put one on the top of the other without even a layer of sand between; when the pit is full another is dug at a distance of nine to twelve inches, and so the process goes on. Acres of ground have been filled in that way. In the Southern Necropolis similar pits are used, each containing from eight to ten coffins, with only a little sand separating one from another. In various other cemeteries the same practices prevail. Dr. Duncan further showed that there are graves built up in this fashion, but these cemetery companies reserved the right to rebury in the same ground at the end of ten years; the remains of the dead may thus be winnowed from the soil and thrown to the bottom of the grave, which is then supposed to be ready for use again. This, however, is not now done to such an extent as formerly, but another plan is sometimes adopted: a layer of earth is put over the previous pit and used as a burying-ground, so that the graves stand tier on tier. Altogether, a very strong case is made out for Government interference. It is disgraceful that a system put a stop to in every other civilised country in Europe should be continued unblushingly in Scotland. The Burials Act certainly needs amendment to the extent aimed at in the resolution. The Burials Act, as it stands, gives every local authority compulsory powers to secure ground for the proper interment of the people; but it contains a clause which prevents any benefit being got from it in this country. This clause enacts that local authorities may make an agreement with private cemetery companies to inter their poor for them in any way these companies think proper. The cemetery companies are here under no regulation whatever, and can do exactly as they like. If the Act were amended as suggested, and its operation enforced by due inspection, local authorities could deal summarily with private cemeteries, and could by proper regulations prevent such a nuisance arising. At present a local authority has to proceed under the Public Health Act, and unless it can prove to the satisfaction of the sheriff that there is an immediate danger to health, it has no power whatever. Country authorities in this, as in all matters relating to sanitation, have been shamefully neglectful of their duty; indeed, Sheriff Spens remarked that in rural districts the parochial boards were no authorities at all so far as doing practical work is concerned.

THE MYSTERIOUS OUTBREAK OF DISEASE IN A REFORMATORY.

A further report on this epidemic (see current vol. of LANCET, p. 601) has been made by Dr. J. B. Russell. In all sixty-four inmates have been attacked, only two of these belonging to the girls' side of the institution. There have been four deaths. The nature of the affection remains something of a mystery, the consultants whom Dr. Russell called to his aid not being of one mind in the matter. "Of hitherto defined diseases, 'influenza' of a malignant type and 'infectious pneumonia' are the only choice. Something may be said both for and against each, but whether this outbreak falls under either denomination, or arises from some new septic poison, or from some other known septic poison, acting under circumstances of special local aggravation," is not yet clear. "Whatever may be the ultimate diagnosis, we are driven back upon the local insanitary conditions. There is a blood poison of some sort, which is either created or intensified by these conditions." In support of these views Dr. Russell quotes accounts of somewhat similar outbreaks of disease in institutions of the same kind. For example, ten years ago, in Westthorn Roman Catholic Reformatory for Boys a similar disease appeared, and at the same season, in

which two patients died rapidly; two years ago there was another outbreak, but without fatality, and there have been sporadic cases always in cold weather. Again, in Birkdale Roman Catholic Reformatory for Boys, in January, 1887, the disease appeared, proved rapidly fatal to three boys, and from time to time seized the boys in twos and threes till twenty-three had been affected. Further, "under the title of 'A Febrile Epidemic Illness,' Dr. Seaton of the Local Government Board described, in 1885, an outbreak in a Roman Catholic school, or orphanage for boys, near London, which caused 157 illnesses and 7 deaths, some as rapidly as in the case of St. Mary's, with almost identical symptoms. As to the causation of these various epidemics, I am much struck with the fact that the medical officer of Birkdale specifies as one of the sanitary defects there the use of the school-room as a play-room in the winter evenings, where the atmosphere soon becomes 'stuffy and fetid.' This is precisely the practice at St. Mary's on the boys' side. There is no play-shed for the boys, and during winter and in bad weather the 200 inmates are supposed to find recreation in the school-room, which contains 24,000 cubic feet, and has a floor space of 1860 square feet, encumbered with forms and desks. Dr. Newsham of Birkdale says: 'I have been driven to imagine that this condition of things may amount practically to overcrowding, and that the production of some bacterial poison similar to typhus may result.'" One curious suggestion has been made as to the causation of the epidemic—namely, that it was due to tobacco-chewing; but this would not give rise to a febrile disease—indeed, tobacco being a narcotic would lower the temperature. It may, however, depress vitality, and provide ready victims to the disease. All the boys attacked were not tobacco-chewers, but it is stated that all the lads who died were addicted to the practice.

ILLEGITIMACY IN THE NORTH OF SCOTLAND.

At a meeting of the Royal Society of Edinburgh on March 19th, Mr. George Seton read a paper on Illegitimacy in the Parish of Marnoch, Banffshire. An examination of the birth register for the ten years ending 1886, in Marnoch, elicited the startling facts that during that period there were 1082 births—an annual average of 108; illegitimate births, 277; paternity not acknowledged at registration, 225; cases acknowledged, 52; cases found by decree of court, 10. Of the 277 children, domestic servants gave birth to 217, farm servants to 15, agricultural labourers 23, and miscellaneous 22. After marriage misconduct among them was rare. Among the remedial measures he favoured were the placing of cases of seduction in the hands of the public prosecutor, proper supervision of female workers, and the providing of better sleeping accommodation for servants.

DUBLIN.

(From our own Correspondent.)

THE COLLEGE OF PHYSICIANS AND THE APOTHECARIES' CONJOINT SCHEME.

As your readers are aware, the Vice-Chancellor, in the recent litigation between the College of Physicians and the Apothecaries' Hall and Royal College of Surgeons, decided that the Apothecaries' Hall was a medical corporation entitled to combine with the College of Surgeons in a conjoint scheme of examination. This contest has cost the College of Physicians, who can but badly afford it, a sum of about £700, and it was rumoured that they expected to obtain a reversal of the decision by an appeal against the Vice-Chancellor's judgment. The matter has been recently before the College, and having been thoroughly discussed, they have determined by a majority of three votes (nineteen voting) not to proceed to an appeal. Although they refuse to join the Apothecaries, the connexion between them and the College of Surgeons will not be severed, but continue as before. The delay caused by this unfortunate litigation has been of serious injury to the Apothecaries, for if the College of Physicians had not interfered the November examination of the Apothecaries' conjoint scheme could have taken place, but has unavoidably been postponed to May 14th. In consequence of the uncertainty that prevailed, a good many students this year will go to Edinburgh, who otherwise would have entered for the Apothecaries' scheme of examination, but now that matters are finally settled a change in this respect is confidently expected.

THE LATE DR. TRAVERS' APPOINTMENTS.

The Provost and senior Fellows of Trinity College have elected Dr. Henry Bewley a lecturer in Medical Jurisprudence; and the Board of the Ledwich School of Medicine have appointed Dr. C. H. Robinson a lecturer in the same subject in their institution. Both these appointments are for the summer session of the present year.

CORK PROTECTIVE MEDICAL ASSOCIATION.

This Association having passed a resolution in reference to Dr. Magner, which contained a clause which savoured to some extent of boycotting, several members of the Association, as the objectionable clause was not removed, have sent in their resignation. Quite recently Dr. Sandford, the secretary, has placed his resignation in the hands of the Association, inasmuch as irresponsible outsiders were permitted to introduce the poison of political partisanship into their councils, and thereby the Association has had a party colouring given to its transactions, never contemplated when the Society was inaugurated.

THE MEATH HOSPITAL.

On Monday last the lady probationers of the Red Cross Nursing Sisters' House and Training School for Nurses were presented with the Sessional Prize Examination Certificates in the Meath Hospital by Sir G. Owens. The first prize was presented to Miss Marie Maxwell; the second to Miss M. Donnegan; and the third to Miss Patchell.

Dublin, April 10th.

PARIS.

(From our own Correspondent.)

THE CONGRESS OF SURGERY (*continued*).

M. PONCET of Lyons made some remarks on the resection of the urethra or urethrectomy in certain forms of stricture. He considers that external urethrotomy is altogether insufficient in certain forms of stricture—that is to say, in strictures that are insurmountable and already operated upon by urethrotomy. In these cases recourse must be had to urethrectomy. The results obtained by M. Poncet have nearly always been satisfactory: the urethra resumed its functions, coitus and micturition being accomplished without difficulty or pain.

M. Bazy of Paris, brought to notice two rare cases of foreign bodies in the bladder. The first was that of a woman aged sixty-six, who was admitted into the St. Louis Hospital for painful and frequent micturition of six months' standing. On examination, a stone was found in the bladder, which proved to be phosphatic, and which was probably developed around a foreign body. The stone was broken up with a lithotrite, which seized a packet of strong linen thread, of from five to six metres, entangled. Incontinence of urine resulted from the manœuvres necessitated by the introduction of this foreign body, which was cured by ten sittings of local electrisation. The second case is relative to a man of forty-five years, of very limited intelligence, who, under the pretence of catheterising himself to remedy certain troubles of micturition, introduced the penis of a pig into his urethra. Having been taken by surprise in this operation, he let go the foreign body, which slipped into the bladder. An almost complete retention of urine was the result, and when the patient was catheterised a quantity of very fetid urine was drawn off. The next day, by means of an instrument analogous to the lithotrite, with flat blades, the foreign body, which measured thirty centimetres in length, was easily removed.

M. Ehrmann of Mulhouse, who stated that he was the first to apply uranoplasty to children, and even to those of very tender age, gave an account of forty-one cases in which he performed the operation. He stated that the condition indispensable to the success of the operation is the after-care of the patient. As regards the age at which uranoplasty should be practised in children, the earlier it is possible to be done the better, even before the child has complete use of speech; in this way one would not have to contend against the defective pronunciation already acquired by the little patient.

M. Reverdin of Geneva prefers the employment of "sutures perdues" with aseptic thread in certain plastic operations.

These sutures, while they ensure the solidity of the reunion, equally ensure hæmostasis. This hæmostatic action, far from being indifferent in the operaton, augments still more the chances of reunion. The indications for the use of these sutures are numerous. They may be usefully employed in the radical cure of herniæ, in the ablation of divers tumours, neoplasms of the breast, ruptures of the perineum and of the vulva, &c. The author considers these sutures most convenient and advantageous.

M. Guyon of Paris proposes the following principles for hypogastric lithotomy. The surgeon should penetrate at once into the bladder and by punctures, instead of incising layer by layer. The bladder, once opened, should be suspended by threads, then carefully drawn and fixed outside. This manœuvre alone permits the surgeon to effect with security in this organ the movements which are necessary for the extirpation of a tumour, at the same time the opening of the vesical pouch is rendered larger, and the largest stones may be easily passed through.

M. Segond of Paris considers the question of the surgical treatment of cysts of the liver as being settled. At the commencement the puncture with the aspirator should always be practised, as it ensures the diagnosis and may effect a cure. If the liquid is reproduced, a large incision of the cyst should be practised. As regards the operative mode of subdiaphragmatic hepatic cysts, M. Segond, basing himself on the facts which he had observed, considers that the transpleural incision with costal resection, at one and the same time, should be the procedure to be preferred. The dangers which this mode of intervention may create appear not to be so great as those which result from manœuvres, such as pulling about the liver, necessitated by the anterior incision. As regards the pretended advantages of the method in two parts, M. Segond contests them as well for the pleural opening as for the transperitoneal opening of hepatic cysts, and he concludes that the transpleural opening of subdiaphragmatic cysts is a simple operation, of not much gravity, and very efficacious.

M. Maunoury of Chartres reported the case of a woman affected with a hydatid cyst of the liver, on whom he had operated in the following manner. After having practised an opening in the tenth intercostal space, he incised the costal pleura, then the diaphragmatic pleura, and sutured the two flaps together in such a manner as to create a complete canal through the serous membrane; he then completely incised the diaphragm and exposed the cyst, and the latter was opened and sutured to the skin as in ordinary laparotomy. The operation proved successful, and the patient was cured.

M. Pozzi of Paris reported the case of a woman aged thirty-four on whom he had practised complete extirpation of a hydatic cyst of the liver situated on the left lobe, which was followed by complete success.

M. Accolas of Rennes cited the case of a soldier who was affected with an abscess of the liver, which was treated after the method of Little—punctures and free incisions on each side of the trocar. The patient was rapidly cured.

M. Horteloup of Paris, after having described the operation of suturing the intestine for an artificial anus resulting from a large stercoral abscess, called the attention of the members of the Congress to the treatment that should be followed after an operation practised on the intestine. Instead of administering opium the day after the operation, as is generally done, M. Horteloup prescribes enemata of glycerine, and five grammes of castor oil every two or three days, so that the patient may not be more than twenty-four hours without having his bowels moved. This treatment has always succeeded.

M. Labbé of Paris related the history of a child who in playing with a toy (a metallic star with sharp points) swallowed it. No immediate inconvenience was felt, but during the night the child was suddenly seized with dyspnœa, when a medical man was sent for, who diagnosed stridulous laryngitis. The next day the patient was taken to the hospital, where, after a laryngoscopic examination, the foreign body was recognised. Attempts were made in vain to remove it through the natural passages, and M. Labbé, after having anæsthetised the child, practised the median section of the thyroid cartilage; but in the course of the operation asphyxic accidents manifested themselves. It then became urgent to practise tracheotomy, and during forty-five minutes artificial respiration was kept up. As soon as the respiration was re-established the foreign body was rejected spontaneously. The soft parts were then sutured. The cannula was removed on the eighth day, and the voice was perfectly restored as before the operation. M. Labbé observed that this case points to the absolute necessity of preceding thyroidian laryngotomy by tracheotomy.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council held on Thursday last the Minutes of the ordinary Council meeting on March 8th were read and confirmed.

Mr. Sibert Cowell was appointed Assistant Secretary to the College.

The Jacksonian Prize for the past year, on the Diagnosis and Treatment of Tumours of the Bladder, was awarded to the author of the dissertation bearing the motto "Thorough." This was found to be Mr. E. Hurry Fenwick. The Council also recognised the merits of the dissertation bearing the motto "Veritas" as deserving of special mention, and Mr. F. A. Southam, who was found to be represented by this motto, is to be invited to attend with the winner of the prize at the next meeting of the Council on May 10th by special resolution. The subject of the Jacksonian Prize Essay for the year 1889 is "The Pathology, Diagnosis, and Surgical Treatment of Intracranial Abscess and Tumour."

The report of the Committee of Management of March 20th states that, in consideration of the necessary additional work which has fallen on the staff during the past year, involving as it did a considerable extension of the office hours beyond those originally contemplated, the committee have thought it right to recognise their services by awarding to the secretary 50 guineas, to each of the two senior clerks 15 guineas, and to the junior clerk 10 guineas. This course was approved, adopted, and entered on the Minutes.

The following report, dated April 11th, 1888, from the committee on the form of the report of the Council to the annual meeting of the Fellows and Members of the College, was read, approved, and adopted:—"The committee are of opinion that no alteration should be made in the report, so far as the materials from which it is framed are concerned; and that, in addition to the returns as to the examinations and the statement of accounts, in which no change is necessary, it should only contain, as heretofore, an actual record of the transactions of the Council; but the committee recommend that the form in which the report is drawn up should be altered so as to provide that, in the arrangement of the several subjects discussed and determined by the Council, each subject should, within the range of the period to which the report relates, be complete."

The following report, dated April 3rd, 1888, from the president and vice-presidents on the arrangements for the College lectures, was read, approved, and adopted:—"The presidents and vice-presidents have to report that, in pursuance of the resolution of the Council of the 9th of June, 1887, they have taken into consideration 'the propriety of rearranging the lectures annually delivered in the College, and of making them more serviceable to the profession;' and that they are not prepared to recommend to the Council that any alteration should be made in the arrangements for the lectures, believing that the plan recently adopted of dividing the lectures amongst several professors has been to some extent successful, as evidenced by the increased attendance upon them, and that it would therefore be inopportune at present to make any change in the plan." It was also agreed that the experiment of delivering the lectures at 5, instead of 4 P.M. as hitherto, be tried.

Sir T. Spencer Wells, Bart., was elected Morton Lecturer on Cancer and Cancerous Diseases for the present year.

A letter of the 15th ult. was read from the Privy Council, stating that the Government have determined to advise Her Majesty to refer the subject of the granting of Degrees in Medicine and Surgery to a Royal Commission.

Dr. Jeffrey Allen Marston, C.B., Deputy Surgeon-General, and Mr. Thomas Annandale of Edinburgh, were elected Fellows of the College under Section 5 of the Charter of the 15th Victoria, applicable to Members of the College of twenty years' standing.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Member, having passed the necessary examinations on Nov. 24th, 25th, 26th, and 27th, 1886, and having since attained the legal age (twenty-five), was at a meeting of the Council on the 12th inst. granted his diploma of Fellow of the College:—

George Palmerston Newbolt, M.B.Dur., Newcastle and St. Barthol.'s Hosp.; date of Membership, Jan. 22nd, 1885.

The following gentleman, having passed the necessary examination, was admitted a Member of the College:—

Edmund Lyall Haynes, St. Bartholomew's Hospital.

UNIVERSITY OF CAMBRIDGE.—The new chemical laboratory, which has been built at a cost of some £30,000, will be ready for occupation during the Easter term. It is announced that Dr. Anningson, medical officer of health for Cambridge, University lecturer in Medical Jurisprudence, and secretary of the State Medicine Syndicate, and Mr. Robinson, assistant to the Professor of Chemistry, will organise a class in Practical Hygiene, to be held in the new laboratory during the long vacation. The course will include the analysis of air, water, and food, and the demonstration of sanitary models, with special reference to the requirements of the Dip. Pub. Health Examination in next October. Information as to dates and fees may be obtained on application to Dr. Anningson or to Mr. Robinson. The Professor of Chemistry also announces a laboratory course in Pharmaceutical Chemistry, suitable for candidates for the second M.B. examination.

DR. MIDDLETON has, as was to be expected, been acquitted of the murder of the gipsy guide who attempted his life in the cathedral at Cordova.

IT has been decided to erect at Woodhall Spa, Lincolnshire, a hospital for the benefit of sufferers from gout, rheumatism, and skin diseases.

AT the forty-third anniversary dinner of the German Hospital at Dalston, on the 11th inst., subscriptions and donations amounting to £4338 were announced.

PARLIAMENT HILL.—The St. Pancras Vestry has agreed to contribute £30,000 towards the purchase of Parliament Hill for the use of the public.

INFECTIOUS HOSPITAL, NOTTINGHAM.—The Town Council has decided to erect an infectious hospital, at a cost of £23,000.

DR. OLIVER WENDELL HOLMES is stated to have given his valuable and extensive collection of medical books to the medical library at Boylston-place, at Boston.

HOSPITAL SUNDAY COMMITTEE, BARNSLEY. — The annual report, just issued, shows that £640 had been handed over to the Beckett Hospital, as the result of the committee's work during the past year.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund held on the 10th instant, T. Russel Pickthorn, Esq., Inspector-General, in the chair, the sum of £53 was distributed among the several applicants.

INFECTIOUS DISEASE HOSPITAL FOR RAWTENSTALL.—At a recent meeting of the Haslingden Board of Guardians permission was given for the erection of a temporary hospital at Rawtenstall.

SHEFFIELD CHILDREN'S HOSPITAL.—On the 5th inst. Lady Alice Fitzwilliam opened the new wards of this charity, in the presence of a distinguished party. In future there will be accommodation for thirty-four little sufferers, instead of fourteen as formerly.

AT the Shrewsbury Borough Police Court on the 9th inst. a provision dealer was fined £20 and costs for supplying the Salop Infirmary with butter that was adulterated with margarine. The compound was found to contain only 20 per cent. of butter.

AT a recent meeting of the Council of the University College, South Wales and Monmouthshire, it was resolved to memorialise the Queen on the subject of making Cardiff a nursing centre in common with London, Edinburgh, and Dublin, by means of the surplus of the Women's Jubilee Offering.

THE COMPANY OF PLUMBERS.—The first nominations for the registration of plumbers in Edinburgh and the east of Scotland have been received from the Council recently formed in Edinburgh under the presidency of Sir Douglas Maclagan, M.D., to extend the registration system in that district of Scotland.

A GERMAN PEABODY.—Professor Hermann, a Privy Councillor and member of the Cologne Common Council, has given 450,000 marks and a large plot of suburban land, for the purpose of building eighty-seven one-storey houses for working men of Cologne. The new section of the municipality is to be called Wilhelmsruhe, in memory of his father, and the rents which accrue are to go to a fund for building more houses.

PROPOSED NEW HOSPITAL, LINCOLNSHIRE.—The Earl of Winchelsea and Nottingham presided at a meeting held at Lincoln on the 7th inst., when it was resolved to promote the establishment of a hospital at Woodhall Spa, for the benefit of persons suffering from rheumatism, gout, and cutaneous diseases.

SWALLOWING ARTIFICIAL TEETH.—On the 10th inst. an inquest was held in Bermondsey on the body of an aged man who was suffocated in bed by swallowing a set of false teeth. A verdict of accidental death was returned. The danger of retaining false teeth in the mouth during sleep has been frequently pointed out. Putting cleanliness out of the question, the practice is a dangerous one, and the trouble of removing them is so slight as to be almost *nil*.

A NEW WING TO THE STOCKPORT HOSPITAL.—The Sanitary Committee of the Stockport Corporation, have, at the instance of Dr. Rayner, medical officer of health, been considering the hospital accommodation of the borough, and it has been decided to erect a new wing to the existing hospital in Dialstone-lane, providing room for twenty beds, and accommodation for isolating patients for treatment when necessary.

LITERARY INTELLIGENCE.—Naturalists are looking forward with interest to a work by professor Alexander Agassiz, to be published at an early date by Sampson Low and Co., in two volumes. The work will describe the results of researches made in the U.S. steamer *Blake* in the Gulf of Mexico, the Caribbean Sea, and along the Atlantic coast of the United States from the year 1877 to 1880. The volumes will, we understand, be illustrated by some 500 engravings, and by coloured maps and diagrams.

FOOTBALL FATALITIES.—At a match at Whalley Range, Manchester, on Saturday last, between past and present members of the Manchester Football Club, Mr. J. H. Fletcher, of Bean Cliffe, Eccles, aged twenty-three years, sustained such serious injuries to his neck and spine that he was at once conveyed to the Manchester Royal Infirmary, where he died the following morning.—Joseph Smith (twenty-three), who was seriously injured in a football match at Hexham-on-Tyne on Saturday, has died from the effects of the injuries to his spine.

CHELTENHAM HOSPITAL FUNDS.—The adjourned annual general meeting of the subscribers for the purpose of receiving a report from the committee appointed to consider the accepting or declining the terms of the National Debt (Conversion) Bill has just been held; General Muspratt-Williams presided. The great bulk of the funds of the hospital, amounting to upwards of £30,000, is invested in consols. The report went fully into the question, and was in favour of accepting the terms offered by the Chancellor of the Exchequer. The committee recommended the general meeting of the subscribers to instruct their trustees accordingly, which was agreed to.

AMERICAN HAMS AND LARD.—The *New York Herald* of the 26th ult. contains an interesting account of the manufacture of "prime sham lard" from diseased and smothered hogs. One witness, who stated that he had only gone out of the business because he could not deal honestly in it, admitted that he had cut hogs into hams &c., well knowing them to be diseased. The use of cotton-seed oil and stearine in the production of refined lard is well recognised, but we commend the above disclosures to the careful consideration of housewives who extensively use American hams and so-called lard.

THE LOCAL GOVERNMENT BILL.—A meeting of the representatives of local boards and urban sanitary authorities throughout the kingdom was held at Leeds last week. Dr. Hewitt of Northwich presided. A resolution was unanimously adopted agreeing with the general principles of the Bill, and a committee appointed to watch its progress, and to suggest alterations during its passage through the Houses of Parliament.

THE NORTH RIDING INFIRMARY. — The annual report, just issued, states that the pressure on the accommodation of the house had continued throughout the past year. The number of in-patients was 572, and, though less than the previous year, was largely above the average. The subscriptions and donations showed an increase of £107 8*s.* 6*d.*, an improvement mainly due to workmen's subscriptions. The expenditure was in excess of last year by £134 9*s.* 6*d.*, and the debt on the institution now was £730 16*s.* 9*d.*

BEQUESTS.—The late Mr. David Maclure, letter-press printer, of Glasgow, has bequeathed legacies to the following institutions, free of Government duty:—The Royal Infirmary, Glasgow, £25; the Western Infirmary, £25; the Eye Infirmary, Glasgow, £10; the Glasgow Lock Hospital, £5; and Miss Clugston's Home for Incurables, £10.—Miss Elizabeth Cunningham, of Lytham, and formerly of Blackburn, has bequeathed £3000 to the Blackburn and East Lancashire Infirmary.

MEDICAL NOTES IN PARLIAMENT.

Army Medical Officers.

IN the House of Commons on the 5th inst., Mr. E. Stanhope, in reply to a question which appeared on the paper in the name of Dr. Tanner, stated that it was not intended to prevent medical officers from retiring after twenty years' service; but it was proposed to require a reasonable service in a given rank before allowing retirement on the rates permitted for that rank. The power of retirement after twenty years' service was undoubtedly held out as an inducement to candidates to come forward; and as regarded that retirement on £1 a day, no restriction would be placed on it. The last paragraph of the question—"whether the provision under the Royal Warrant of November, 1879, if interfered with, would affect the retirement of those medical officers who entered the service since the warrant was issued"—touched on vested interests. These, as in all other branches of the service, must be regarded as governed by the rule enunciated by Lord Penzance's Royal Commission of 1876—that an officer's rights were limited to the rank he held; and this rule was embodied in the preamble to the Royal Warrant.

The Horse Tax.

On the 6th inst., Mr. Hozier asked the Chancellor of the Exchequer whether he could see his way to permit medical men to keep at least one horse each free of horse tax. Dr. Farquharson said that before the question was answered he should like to ask whether horses used by medical men for professional purposes might not fairly be considered as horses used for trade purposes. The Chancellor of the Exchequer, in reply, stated that he found that there was a precedent for such an exemption. Up to 1869-70, when the horse tax stood at one guinea, doctors and ministers of religion paid only half the duty, and this continued till the duty was reduced to 10*s.* 6*d.* for everybody. The question whether one horse ought to be exempted in the case of doctors and ministers of religion was receiving the consideration of the Government, but it was not to be forgotten that exemptions are almost always of an invidious nature, and it was difficult when exemptions from duty were once made where to draw the line.

On Thursday, Mr. Knatchbull-Hugessen asked the Chancellor of the Exchequer whether it is the fact that medical practitioners are now allowed to deduct the expenses of their horses in the calculation of income tax, as being necessary for the carrying on of their business. The Chancellor of the Exchequer: Yes, sir, if the horses are used solely in the exercise of the profession, they would be exempt in the manner suggested by the hon. member. I think I understand that the drift of the question relates to another matter. (Hear.)

The Drainage of County Buildings.

In the House of Commons, on the 6th inst., Mr. Ritchie, in answer to Mr. Mowbray, said that the extra expense caused to a sanitary authority in carrying out a scheme of sewerage by reason of the drainage of county buildings, such as lunatic asylums within the district, was defrayed by the local rates. The Government were willing to consider the question of assessment in connexion with the Lunacy Acts Amendment Bill, but could not insert provisions on the subject in the Local Government Bill.

Pharmacy Acts Amendment Bill.

Dr. Farquharson moved the second reading of this Bill, which had come down from the House of Lords; but, on the motion of Mr. T. P. O'Connor, the House was counted, and the requisite number of members not being present the sitting terminated.

Pleuro-pneumonia in Cattle.

On the 9th inst., Mr. Walter Long, in reply to Mr. Hozier, who asked whether the proposed committee of inquiry into pleuro-pneumonia in cattle was to be empowered to conduct practical experiments, with the view of ascertaining the value of inoculation, and, if not, why not, said that no definite answer could be given until the committee was formed. It was for the committee to decide what evidence was necessary to enable them to come to a sound conclusion.

Privileges of Medical Practitioners.

Sir W. Hart-Dyke, answering Mr. Arnold Morley, said that the Privy Council had received no statement showing that registered medical practitioners in the United Kingdom were afforded privileges of practising in the United States of America. The Government had not received from the Government of the United States any representations that privileges should be given to legally qualified American practitioners who might be desirous of practising medicine in the United Kingdom.

The Indian Medical Service.

On Thursday, Sir Guyer Hunter asked the Under Secretary of State for India whether honorary surgeons to the Viceroy of India have been prohibited wearing the aiguiletts heretofore used by them; if so, by what authority and on what grounds?—Sir John Gorst, in reply, said: Under the dress regulations of the Army, honorary surgeons to the Viceroy have no authority to wear such a decoration; if they have been in the habit of so doing, it has been an irregularity.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST EXAMINATION.

PART III.—ELEMENTARY PHYSIOLOGY.

Tuesday, March 27th, 1888, from 10 a.m. to 1 p.m.

Candidates must answer at least four of the six questions. Candidates unable to answer four questions must report the fact to the Presiding Examiner.

1. Two microscopical specimens to be recognised. (The answer to be given orally to the examiner.) 2. Describe the coagulation of the blood. 3. State the differences observed in the contraction of striped and unstriped muscle. 4. Describe the digestion of milk. 5. Enumerate the chief constituents of urine. 6. Describe the relations existing between nerve fibres and nerve cells.

SECOND EXAMINATION.

PHYSIOLOGY.

Wednesday, March 28th, 1888, from 3 to 6 p.m.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Describe the chemical composition and microscopical appearances of chyle and lymph. What is the origin of lymph? By what means is it returned to the blood? 2. Describe the blood flow in the arteries, and the modifications to which it is liable. Explain how any of these modifications are brought about through the nervous system. 3. Mention the immediate and remote results of complete section of the facial nerve as it issues from the medulla. 4. Explain how the heat of the body is produced, and the normal temperature maintained. 5. Describe the structure of the spleen. 6. What is the quantity of CO$_2$ daily produced in the average adult? What are the chief conditions determining a variation in amount? Where is it formed? How is it eliminated?

Note.—This paper also applies to candidates under the old regulations for the Licence of the Royal College of Physicians of London and for the Membership of the Royal College of Surgeons of England.

ANATOMY.

Thursday, March 29th, 1888, from 3 to 6 p.m.

Candidates must answer at least four questions. Candidates unable to answer four questions must report the fact to the presiding examiner, and are not allowed to proceed with their examination.

1. Give the attachments of the posterior annular ligament of the wrist, and state the position of the various structures in relation with it. 2. Describe the frontal bone. 3. Give the origin, course, and distribution of the obturator nerve. 4. Give the origin, insertion, and nerve supply of the following muscles:—(*a*) Subclavius, (*b*) pterygoideus externus, (*c*) rectus abdominis, (*d*) biceps flexor cruris. 5. Describe the tongue. How is it connected with surrounding parts? Give its arterial and nerve supply. 6. Give the position and relations of the abdominal aorta. Enumerate its branches in the order in which they arise.

Note.—This paper also applies to candidates under the old regulations for the Licence of the Royal College of Physicians of London and for the Membership of the Royal College of Surgeons of England.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BARROW, ARTHUR H., M.R.C.S., has been appointed Medical Officer to the A H C Guild, Sydney.

BOND, J., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Central London Ear, Throat, and Nose Hospital, Gray's-inn-road.

BOWKER, CHARLES S., L.R.C.S., L.M.E., L.F.P.S.Glas., L.R.C.P., has been appointed House Surgeon to the Royal Infirmary, Glasgow.

BROOKS, J. PRATT, M.R.C.S., has been appointed Clinical Assistant to the Central London Ear, Throat, and Nose Hospital, Gray's-inn-road.

BROOKS, R. P., M.R.C.S., L.R.C.P., has been appointed Second House Surgeon to the Tottenham Training Hospital, Tottenham.

CLEMOW, FRANK G., M.B., C.M.Ed., has been appointed Resident Medical Officer to the British Seamen's Hospital, Cronstadt, St. Petersburg.

EATON, JAS. W., L.R.C.P.Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Bingham Rural Sanitary District, Notts.

FISHER, ALFRED, M.R.C.S., L.R.C.P.Ed., has been appointed Honorary Medical Officer to No. 2 District of the Ladies' Charity and Lying-in Hospital, Liverpool, vice William O. Pughe, M.B.Lond., resigned.

GEMMELL, JOHN E., M.B., C.M.Edin., has been appointed Honorary Medical Officer to No. 4 District of the Ladies' Charity and Lying-in Hospital, Liverpool, vice Meyer J. Bernstein, M.B., C.M.Ed., resigned.

HAYDON, FRANCIS EDWARD, M.B.Glas., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Witheridge District of South Molton Union, vice Llewellyn, deceased.

HOLMES, THOS. D. H., M.B., C.M.Ed., has been appointed Assistant Medical Officer to the East Riding Asylum.

JAMES, J. T., M.B., F.R.C.S., has been appointed Assistant Surgeon to the Central London Ophthalmic Hospital.

LOVETT, SAMUEL ROBERT, L.R.C.P.Lond., L.S.A., has been appointed Temporarily Medical Officer of Health to the Great Berkhamsted Rural Sanitary District.

MACALISTER, CHARLES, M.B.Ed., has been appointed Honorary Pathologist to the Royal Southern Hospital, Liverpool, vice J. R. Dixon, M.R.C.S., resigned.

MCKINSTRY, W. H., M.B., C.M.Glas., has been appointed Assistant Surgeon to the Liverpool Dispensaries.

MECHAN, JOSEPH, M.B., C.M. (late Resident Assistant, Glasgow Royal Infirmary), has been appointed Resident Assistant Medical Officer to the Glasgow Town Hospital.

MOORE, EDWIN, M.D. St. And., M.R.C.S., has been appointed a Certifying Factory Surgeon for Preston, vice Robinson, deceased.

PEDLER, WILLIAM FREDERICK, M.R.C.S., L.R.C.P.Lond., L.S.A., has been appointed House Surgeon to the Richmond Hospital, vice W. A. Payne, resigned.

SALISBURY, CHARLES R., L.R.C.P.Lond., M.R.C.S., has been appointed House Physician to the General Infirmary, Leeds.

SIMPSON, SAMUEL, M.B., B.Ch.Dub., has been appointed Second Assistant Medical Officer to the Somerset and Bath Asylum, Wells, vice W. S. Barnes, M.D., resigned.

SINCLAIR, WM. JAPP, M.D.Aber., M.B., C.M., has been appointed Professor of Obstetrics at Owens College, Manchester, vice Cullingworth, resigned.

SMITH, WILLIAM T., M.R.C.S., has been reappointed Medical Officer of Health for the Lepton Urban Sanitary District, Yorkshire.

SPICER, ROBERT H. S., M.D.St.And., L.R.C.P.Ed., M.R.C.S., has been appointed Physician for Diseases of the Throat to St. Mary's Hospital.

WEBB, JNO. B., M.R.C.S., L.R.C.P.Lond., has been appointed Assistant Surgeon to the Liverpool Dispensaries.

WHITBY, CHAS. J., B.A., M.B Cantab., has been appointed Assistant Surgeon to the Liverpool Dispensaries.

WILLS, WILLIAM ALFRED, M.B.Lond., M.R.C.S., has been appointed Medical Registrar at Westminster Hospital, vice Dr. Syers, resigned.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £50 per annum, with the fees for notifying infectious cases. Board, lodging, and washing free. No wine or beer.

BOROUGH OF BRIGHTON.—Medical Officer of Health. Salary £500 per annum.

BOROUGH OF DERBY NEW LUNATIC ASYLUM.—Medical Superintendent, at £350 per annum, with furnished house, &c.

BRISTOL ROYAL INFIRMARY.—Honorary Assistant Physician to out-patients.

CORK-STREET FEVER HOSPITAL, Dublin.—Registrar and Resident Medical Officer. Salary £150, with furnished apartments, attendance, coal, gas, and milk. A fee of £1 allowed for each midwifery case which occurs in the hospital.

DURHAM COUNTY HOSPITAL.—Honorary Surgeon and Honorary Surgeon Dentist.

LEDWICH SCHOOL OF MEDICINE, Dublin. — Lecturer on Forensic Medicine.

LIVERPOOL STANLEY HOSPITAL.—Senior House Surgeon. Salary £80 per annum, with board, &c. Also Junior House Surgeon. Salary £70, with board, &c.

LONDON TEMPERANCE HOSPITAL, Hampstead-road.—Senior House Surgeon. Salary 50 guineas, with board and residence.—Also Junior House Surgeon. Board and residence in the hospital.

NORFOLK COUNTY HOSPITAL, Thorpe.—Junior Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Senior Resident Medical Officer. In the event of the Assistant Medical Officer being promoted to the senior post, candidates should state if they will take the junior appointment.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Rooms, commons, and washing provided in the hospital in lieu of salary.

THE GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon. No salary, but residence, board, and washing provided.

THE GENERAL INFIRMARY, Leeds.—Clerk for the General Manager's office. Salary £70, with dinner.

Births, Marriages, and Deaths.

BIRTHS.

FENNER.—On the 23rd ult., at Cromer, Norfolk, the wife of Robt. Fenner, M.R.C.S., L.R.C.P., of a son.

GRIFFITHS.—On the 8th inst., at St. George's-terrace, S.W., the wife of Herb-rt T. Griffiths, M.D., of a son.

GROSS.—On the 5th inst., at South-side, Clapham-common, S.W., the wife of Asher Gross, L.R.C.P., M.R.C.S., of a daughter.

SPACKMAN.—On Easter Day, the wife of H. R. Spackman, L.R.C.P.Lond., of Wellington-place, Wolverhampton, of a daughter.

WEST.—On the 9th inst., at King Henry's-road, N.W., the wife of J. Arthur West, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

ACLAND—GULL.—On the 12th inst., at All Saints' Church, Margaret-street, London, by the Right Rev. the Lord Bishop of Lincoln, assisted by the Rev. A. B. Cotton, uncle of the bridegroom, Theodore Dyke, third son of Sir Henry Acland, K.C.B., F.R.S., of Oxford, to Caroline Cameron, daughter of Sir Wm. W. Gull, Bart., F.R.S.

BAUMGARTNER—PATTINSON.—On the 5th inst., at St. Mary's Church, Gateshead, by the Rector the Rev. W. Moore Ede, Henry Speiman Baumgartner, M.B., M.S., M.R.C.S., &c., of Newcastle-on-Tyne, youngest son of John Percy Baumgartner, Esq., J.P., of Gorleston, Suffolk, to Ethel Manson, second daughter of John Pattinson, Esq., of Shipcote House, Gateshead.

BRISTOW—MCVEAGH.—On the 11th inst., at St. Osbury's, Coventry, by the Rev. A. Pereira, O.S.B., Rector, Charles, second son of William Bristow, Esq., Colonel, 2nd Volunteer Battalion the Queen's Royal West Kent Regiment, of Woodlands, Blackheath, to Kate, second daughter of Dr. MacVeagh, J.P., Coventry.

EVANS—BARTON.—On the 11th inst., at St. Mary's, Balham, Charles Silvester Evans, M.B., of Shaftesbury, Dorset, youngest son of the late Benjamin Evans, F.R.C.S., of Brixton, Surrey, to Lilian Mary, only daughter of George Mitchell Barton, Esq., of Calcutta.

HICKSON—DURHAM.—On the 4th inst., at St. George's, Hanover-square, by the Rev. William Rogers, Rector of St. Botolph's, Bishopsgate, Chaplain-in-Ordinary to the Queen, John Godfrey Hickson, of 20, Stanley-gardens, N.W., son of the late James Hickson, of Highgate, to Ellen Lucy (Nellie), second daughter of Arthur E. Durham, F.R.C.S., of 82, Brook-street, Grosvenor-square, W.

ROWBOTHAM—ABBOTT.—On the 5th inst., at St. Mary's, Bideford, Devon, by the Rev. Roger Granville, M.A., Rector, Herbert Claude Rowbotham, Surgeon, Melbourne, Derbyshire, son of the late Dr. Rowbotham, of Woolwich, to Jessie Caroline, daughter of John Abbott, of Bideford.

THORNE—TYRACK.—On the 4th inst., at St. John's Church, Abbeydale, Sheffield, Charles Augustus Thorne, L.R.C.P., second son of Fleet Paymaster J. L. Thorne, R.N., of Southsea, to Jessie, youngest daughter of William Tyrack, Esq., of Abbeydale House, near Sheffield.

DEATHS.

BARRY.—On the 2nd inst., at Nice, France, Michel Barry, M.D., of St. Leonard's, Sussex.

BAXTER.—On the 19th ult., at Ivy Lodge, Tivoli, Cheltenham, Francis Hastings Baxter, M.D., late Surgeon, H.M.'s 54th Regt., Inniskilling Dragoons, and 12th Royal Lancers, aged 69.

RICHARDSON.—On the 4th inst., at Spencer House, Ramsgate, Christopher Thos. Richardson, M.D., late of Warcop, Westmoreland, and Nelson-crescent, Ramsgate, aged 73.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, rue Hautefeuille, près du Boulevard Saint Germain, Paris.
La Pratique du Massage. Par W. Murrell, Professeur à Westminster Hospital. Ouvrage traduit par le Dr. O. Jennings. 1888. pp. 168.

BLACKWOOD, W., & SONS, Edinburgh and London.
Introductory Text-book of Geology. By D. Page, LL.D., F.G.S. Revised, and in great part rewritten, by Chas. Lapworth, LL.D., F.G.S. Twelfth and enlarged edition. 1888. pp. 316.

CASSELL & CO., London, Paris, New York, & Melbourne.
Surgical Applied Anatomy. By Frederick Treves, F.R.C.S. Illustrated with 61 Engravings. Third Edition. 1888. pp. 566.

CHURCHILL, J. & A., New Burlington-street, London.
The Practice of Medicine and Surgery, applied to the Diseases and Accidents incident to Women. By W. H. Byford, M.D., and H. T. Byford, M.D. Fourth Edition, revised, rewritten, and much enlarged, with 306 Illustrations. 1888. pp. 820.

DAVIS, G. S., Detroit, Mich.
On a New Treatment of Chronic Metritis, and especially of Endometritis, with Intra-uterine Chemical Galvano-Cauterisations. By Dr. Georges Apostoli. With 9 Figures in the Text. Translated by A. Lapthorn Smith, B.A., M.D. 1888. pp. 119.

EYRE & SPOTTISWOODE, London.
University of London. The Calendar for 1888-9. Price 4d.

GOVERNMENT PRINTING OFFICE, Washington, U.S.A.
Report on the Mortality and Vital Statistics of the United States, as returned at the Tenth Census (June 1st, 1880). By J. S. Billings, Surgeon, U.S. Army. Part 2, Vol. XII., Plates and Diagrams accompanying. pp. 803.

KEGAN PAUL, TRENCH, & Co., Paternoster-square, London.
The Geological History of Plants. By Sir J. W. Dawson, C.M.G., LL.D., F.R.S. With Illustrations. 1888. pp. 290.
The Science and Art of Religion. By S. B. G. McKinney, M.A., L.R.C.S.Ed., L.R.C.P.Ed. 1888. pp. 479. Price 8s. 6d.

LEWIS, H. K., Gower-street, London.
Diseases of Man: Data of their Nomenclature, Classification, and Genesis. By J. W. S. Gouley, M.D. 1888. pp. 412.
Inebriety, its Etiology, Pathology, Treatment, and Jurisprudence. By Norman Kerr, M.D., F.L.S. 1888. pp. 415.
On Gonorrhœal Infection in Women. By W. J. Sinclair, M.A., M.D. 1888. pp. 143.

LIVINGSTONE, E. & S., Teviot-place, Edinburgh.
The Students' Handbook of the Practice of Medicine, designed for the Use of Students preparing for Examination. By H. Aubrey Husband, M.B., C.M. Fourth Edition, revised and enlarged, with Illustrations and Tables. 1888. pp. 510.

LONGMANS, GREEN, & Co., Paternoster-row, London.
The Fundamental Principles of Chemistry practically taught by a New Method. By Robt. Galloway, M.R.I.A., F.C.S. 1888. pp. 364. Price 6s. 6d.
Watts' Dictionary of Chemistry. Revised and entirely rewritten. By H. F. Morley, M.A., D.Sc., and MM. Pattison Muir, M.A., assisted by eminent contributors. In 4 Volumes. Vol. I. 1888. pp. 752.
Dissolution and Evolution, and the Science of Medicine. By C. Pitfield Mitchell, M.R.C.S. 1888. pp. 246.

PONSONBY, E., Grafton-street, Dublin; SIMPKIN, MARSHALL & Co., Stationers' Hall-court, London.
Ellis's Irish Education Directory and Scholastic Guide for 1888. Price 2s. 6d. pp. 426.

SIMPKIN, MARSHALL, & Co., Stationers' Hall-court, London.
Urinary Diseases: Analysis of 500 Cases of Stone, Stricture, &c. Second Edition. By David Jones, M.D. Edited by Dr. Gordon Jones. pp. 99.

SELL'S ADVERTISING AGENCY, Limited, Fleet-street, London.
Sell's Dictionary of the World's Press and Advertiser's Reference Book. 1888. By Henry Sell. pp. 1348. price 2s.

SMITH, ELDER, & Co., Waterloo-place, London.
Dictionary of National Biography. Edited by Leslie Stephen. Vol. XIV. Damon—D'Eyncourt. 1888. pp. 456.

SPOTTISWOODE & Co., Gracechurch-street, London.
The Dentists' Register. 1888. pp. 252.

SWAN SONNENSCHEIN, LOWREY, & Co., Paternoster-square, London.
The Demon of Dyspepsia; or Digestion Perfect and Imperfect. By A. E. Bridger, M.D., F.R.C.P. 1888. pp. 344.

TRÜBNER & Co., Ludgate-hill, London.
Memory and its Doctors. By Dr. E. Pick, K.F.T. 1888. pp. 185.

Les Courants de la Polarité, dans l'Aimant et dans le Corps Humain; 118 figures; par le Docteur Chazarain et Ch. Désle, 1887.—Bulletins de la Société Anatomique de Paris, 62e Année (1887), 5me Série, Tome I (Rédigés par MM. Darier et Marfan).—The Trial of the Judgment: a Review of the Anarchist Case; by Gen. M. M. Trumbull (Health and Home Publishing Company, Chicago, 1888); price 1s.—Die Rolle der Suggestion bei Gewissen Erscheinungen der Hysterie und des Hypnotismus; von Dr. Armand Hückel (Fischer, Jena).—The Funds of the University of Edinburgh: a Plea for transferring their Administration from the Senatus to the University Court; by a Graduate in Arts (Ballantyne Press, Edinburgh); price 6d.—Exercises for Light Dumb Bells; arranged for Schools and Athletic Clubs; by Richard Plunkett. Second edition (Clowes); price 6d.—The Sanitary Conscience: What is its Value? by Malcolm Paterson, M. Inst. C.E. (Simpkin and Marshall); price 3d.—A Practical Decimal System for Great Britain and her Colonies; by R. T. Rohde (Effingham Wilson).—The Ophthalmic Review; Vol. vii., No. 77 (Churchill).—Estudo Clinico da Ataxia Hereditaria de Friedreich (These); do Dr. A. P. Soares de Souza; Imprensa Nacional (Rio de Janeiro).—Dermpenthesis: Animal Skin-Grafting; by G. F. Cadogan Masterman, M.D.—Die Behandlung der chronischen Herzkrankheiten; von Theodor Schott (Berlin).—The Germ-Theory of Disease; by F. W. Clark, L.R.C.P. Lond., M.R.C.S. (Churchills).—Transactions of the Ulster Medical Society; Session 1886-87 (Falconer, Dublin).—Myra's Crochet Lessons; No. 1 (Myra and Son); price 1s.—Untersuchungen über Heterogenese.—The Housekeeper Series; Vol. i.: English and French Cookery; edited by Percy Lindley; 1s.—Trabalhos do Gabinete de Microbiologia.—Procès Criminel de la dernière Sorcière brûlée à Genève le 6 Avril, 1652; par Dr. Ladame (Le Progrès Médical, Paris).—Ueber Paralysis Agitans (Schüttellähmung); von Dr. Anton Heimann (Hirschwald).—Index Medicus; Index to Vol. ix.: Authors and Subjects; Vol. x., No. 2, February, 1888 (Trübner and Co., and Lewis).—Shelley and Co.'s Complete Press Directory for 1888; 1s.—Transactions of the Obstetrical Society of London; Vol. xxix., for 1888; price 5s.—The Journal of Comparative Pathology and Therapeutics; Part i., edited by J. McFadyean, M.B., B.Sc. (Johnston, Edinburgh and London).—Studier öfver Aorta-Aneurysmens Etiologi; af Karl Malmsten (Hæggströms, Stockholm).—Magazines for April: Good Words, Sunday Magazines, Leisure Hour, Sunday at Home, Boys' Own Paper, Girls' Own Paper, Scribner's Magazine, the American Monthly.—The Human Foot in Health and Disease; by J. Rhys, M.R.C.S., L.S.A. (Leather Trades Publishers London).—Eleventh Annual Report of the Board of Health of the State of New Jersey, 1887.

Medical Diary for the ensuing Week.

Monday, April 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Mr. Richard Bannister: Milk Supply, and Butter- and Cheese-making. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Damer Harrison (Liverpool): A case of Cerebral Abscess treated by Operation.—Dr. J. Milner Fothergill: Small and Moderate Valvular Lesions of the Heart.

Tuesday, April 17.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 3 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
ROYAL INSTITUTION.—3 P.M. Mr. Charles Waldstein: John Ruskin.
SOCIETY OF ARTS.—8 P.M. Mr. W. F. Buchanan: A Hundred Years' Progress in New South Wales.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Specimens:—Mr. Shattock: Rare kind of Pedunculated Body in Knee-joint.—Dr. Sharkey: Alcoholic Paralysis of Phrenic, Pneumogastric, and other Nerves.—Mr. Bowlby: Some cases of Gangrene.—Mr. Doran: Primary Cancer of Fallopian Tube.—Dr. J. Griffiths: Tumour in Neck invading Jugular Veins.—Mr. Bruce Clarke: Sloughing of Bladder following Cystitis.—Mr. Silcock: Cystic Disease in Testis. Card Specimens:—Mr. Bowlby: Unusual Forms of Loose Bodies from Knee-joint.—Dr. Lediard: Enlarged Bursa Patellæ with Outgrowths from Walls.—Dr. N. Dalton: Gummata in Liver of an Infant.

Wednesday, April 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.
ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (St. Bartholomew's Hospital).—4.45 P.M. Discussion upon the papers read by Dr. St. John Brooks and Mr. J. Bland Sutton at the previous meeting. Specimens will be shown by Dr. Brooks and Mr. Sutton. Prof. Alexander Macalister: Dissecting-room Notes and Specimens.—Prof. Curnow: Specimen of Abnormal Development of Skull.—Prof. Charles Stuart: Skeleton of a Child showing Acetabular Bone, &c.—Mr. T. Woodward: Rabbit with Undescended Testicle.—Mr. J. F. Little: Specimens illustrating the Normal Depth of the Cortex of the Kidney.—Mr. W. Bruce Clarke: Cases for Anatomical Specimens.—Mr. Walter Pye: The Growth Rate and Curves of the Long Bones, with especial reference to Rickets.—Mr. Arthur Thomson: Observations on the Pterion in Different Races.
SOCIETY OF ARTS.—8 P.M. Sir Howard Grubb: Telescopes for Stellar Photography.

Thursday, April 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The Chemical Arts.
THE PARKES MUSEUM OF HYGIENE.—5 P.M. Mr. Justice Cunningham: The Public Health in India.
HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Braxton Hicks: Two cases of Ovariotomy complicated with Pregnancy.—Dr. Frankish: On Venesection.

Friday, April 20.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. E. C. Robins: Drainage and Construction.
SOCIETY OF MEDICAL OFFICERS OF HEALTH.—7.30 P.M. Mr. C. A. Watts Parkinson: Notes of an Epidemic of Pneumonia.—Mr. J. F. J. Sykes: Verification and Certification of Deaths.
ROYAL INSTITUTION.—9 P.M. Rt. Hon. Sir Wm. R. Grove: Antagonism.

Saturday, April 21.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Carl Armbruster: The Later Works of Richard Wagner. (With Vocal and Instrumental Illustrations.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 12th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 6	30·27	N.E.	37	33	92	46	31	...	Bright
,, 7	30·25	N.E.	39	37	80	47	32	...	Overcast
,, 8	29·99	N.E.	41	37	95	43	33	·09	Cloudy
,, 9	30·01	N.W.	37	35	64	44	34	...	Overcast
,, 10	30·06	N.	37	35	80	44	33	·05	Cloudy
,, 11	29·90	S.W.	44	43	74	54	37	·05	Raining
,, 12	29·84	W.	44	41	60	47	31	...	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

AN APPEAL.

An appeal is being made for a sum of money to purchase a presentation to the Royal Asylum of St. Anne's Society for the young daughter of Mr. J. H. Heritage, who formerly practised at Peckham. The sum required is £90, and donations towards the special object in view, or offers to help in providing for the education and support of any of the other children, will be gratefully received and acknowledged by Dr. G. C. Jonson, 16, South Eaton-place, S.W., or by Dr. John M. Bright, Park-hill, Forest-hill, S.E., who will gladly answer any inquiries.

Mr. M. Monckton.—We think the passage referred to is scarcely open to the inference drawn by our correspondent.

Mr. John Wilson.—The announcement was made on what appeared to us unquestionable authority. The other matter shall receive attention.

UNQUALIFIED PRINCIPALS.

To the Editors of THE LANCET.

SIRS,—I beg to enclose you a letter which I received in answer to an advertisement for an assistancy which I inserted in THE LANCET a few weeks ago. I shall be obliged if you can give me your opinion upon it without mentioning names, and whether, if I had agreed to the terms mentioned therein, it would have come under the designation of "covering," as mentioned in the article on "Unqualified Assistants" in your issue of to-day's date. I may mention that the first letter purported to be from (as I thought) a qualified man wanting an assistant; and having written to say I would accept the offer (in the meantime refusing several other good offers), I found to my disgust what was the nature of the situation I was asked to accept. I remain, Sirs, faithfully yours,

March 24th, 1888. ——— ———

"—— Dispensary, ——, March 11th, 1888.

"DEAR SIR,—Your letter duly to hand a few days since, but before I finally decide upon engaging you, I would to know whether it would be agreeable to you to have your name engraved along with mine, because I am not duly qualified, and of course you know it is absolutely neccessary to have such done, also would like to have a deposit of £10 on commencing duties, to be returned on leaving, the reason is I have been misled on two seperate occasions, which greatly injured me in the practise, as I mentioned in my first letter, should like you to be out-door for a month or so, on account of Mrs. —— been away, if you can comply with my terms, I'll engage you at once and would like you to come to me about the 19th or 20th. "Yours truly,

"——— ———."

"P.S.—The practice is quite young so you would ample time for reading."

MANUFACTORIES OF QUININE.

THERE are, it is believed, about eighteen factories of chinchona quinine in different parts of the world, in addition to the Government factories and plantations in India, where the mixed "bark alkaloids" are prepared, to some extent, for local use. Altogether the yearly output of quinine may be reckoned at about 4,500,000 ounces. The factories comprise 1 establishment in Holland, 2 in England, 2 in Italy, 3 in France, 4 in the United States, and 6 in Germany. In addition to these there are some experimental works in Russia, and these appear to have proved so great a success that the Russian Government is now making preparations for greatly extending the cultivation of chinchona in the vicinity of Tiflis in the Caucasus. Operations are to be conducted on an immense scale. In this way two objects will be secured—the production of the chinchona alkaloids in great quantity as a new industry and a source of revenue, and the economical supply of such preparations for the Russian army generally, and especially for those parts of it which are stationed in the Caucasian and Central Asian provinces, where malarial fever is more particularly common. It is stated that the country around Erzeroum is thought by Russian experts to be even better fitted than the neighbourhood of Tiflis for the growth of chinchona; and it is suggested that this may be one of the reasons why Russia has so long and so persistently endeavoured to induce Turkey to cede or otherwise relinquish this part of Armenia.

F. O'K.—The Gresham, the Star, and the United Kent publish tables of the kind referred to. Most of the other companies, though not publishing such tables, will be found prepared to do the business on favourable terms.

M.R.C.S. has not enclosed his card.

SCARLET FEVER AND PUERPERAL SEPTICÆMIA.

To the Editors of THE LANCET.

SIRS,—As the discussion at the last meetings of the Obstetrical Society on the relation of scarlet fever to puerperal septicæmia excited considerable interest, and could not admit of full inquiry into every aspect of the matter, I would crave a portion of your valuable space in which to consider one or two points bearing on the possibility of scarlet fever giving rise to puerperal septicæmia. At the meeting much importance was attached to Dr. Cayley's statement that he knew of many cases being sent into hospital as scarlatinoid septicæmia which were puerperal septicæmia pure and simple, and had nothing whatever to do with scarlet fever, the proof of this being that no post-mortem evidence of scarlet fever was to be found. Now, with all due difference to Dr. Cayley's great experience and acumen, this statement does not seem conclusive; for, if it be possible for scarlet fever to be transmuted in the puerperal state, and by its peculiar pathological potentialities, surely the pathological conditions and evidences may be transmuted too. The absence of the latter would therefore not negative the previous presence of the former. Clinical observation leads me to believe in such a transmutation of scarlet fever; and at the meeting I related a case bearing on this view. The president suggested that no contention of this kind could be accepted unless those upholding it can give assurance that during and after delivery precautions have been taken to avoid other infection than that of scarlet fever, or, in other words, that absolute asepsis be effected. This requisition, from an argumentative point of view, is apt enough, but it seems to me somewhat unreasonable. In general practice such a consummation is altogether impossible. Nor do I think it attainable under the most favourable circumstances. Even if it be denied that the doctor's or the nurse's poisoned breath may infect, or that the mother may engender septic material within her own unhealthy body—both of which I hold to be possible,—we are met by the fact that the ordinary lochia, as detritus, are always highly septic—harmless to the woman when in good health, but apt to prove poisonous in various conditions of unhealth. However, if by asepsis be meant the application of ordinary strict antiseptic precautions, then I think the challenge a perfectly fair one, and could it be carried out faithfully and over sufficient ground, the result would go far to settle a growing controversy.

I am, Sirs, respectfully yours,

Keppel-street, W.C., April 8th, 1888. J. CHALMERS, M.D.

E. G.—The recent issue of the *Statistiques Sanitaires des Villes de France* and the Tenth Census of the United States (Washington) will no doubt give the information required.

R. P. should take the advice of his medical attendant.

THE HORSE TAX.

To the Editors of THE LANCET.

SIRS,—I read in an annotation in your issue of March 31st that you fear the Chancellor of the Exchequer means to tax the horse of the medical man, and I feel certain this will be so unless we as a profession take some steps to prevent what will be a gross injustice. I would propose that each member of the medical profession should write personally to his Parliamentary representative and ask him to use his influence in our favour when the measure is again brought forward in the House. This should be done at once. I am, Sirs, yours faithfully,

April 2nd, 1888. M.R.C.S. ENG.

IMPROVED MACHINE FOR FRICTIONAL ELECTRICITY.

AT a recent meeting of the Liverpool Chemists' Association, Dr. Symes exhibited and described Mr. Tudsbury's new double-cylinder electric machine for the generation of frictional electricity. It is a modification of the apparatus known as Wimshurst's influence machine, which has now almost entirely superseded the old form of electric machine, in which a cylinder or plate of glass was caused to revolve rapidly, and rub against an amalgamated surface. Wimshurst's machine consists of two plates of glass, the surfaces of which are brought near together, but do not touch each other; they are caused to revolve rapidly in opposite directions. This plan works well, producing large quantities of electricity, even in a damp atmosphere. There are, however, some disadvantages in glass plates, and when they are very large they are apt to split, which is a very serious matter. The modified machine of Mr. Tudsbury is made of ebonite, in the form of two cylinders, very much in appearance like two sieves revolving one inside the other, the sectors being placed transversely across the hoop. This machine, the smaller patterns of which would prove admirably adapted for medical use, is also fitted with a new double high tension discharge, whereby the length of spark obtainable is considerably increased. Glass machines all give positive electricity; the new ebonite apparatus will yield negative electricity in the same manner.

Dr. Bernard O'Connor.—The following are some, though perhaps not all, of the offices which "make the lives of total abstainers a special element in their rates":—The Scottish Imperial, United Kingdom Temperance and General, Whittington, Scottish Temperance, Scepter, Blue Ribbon.

Dr. Alfred G. Barrs.—The current Transactions of the Société de Biologie.

Iron.—We do not prescribe.

THE CLIMATE OF CALIFORNIA.

To the Editors of THE LANCET.

SIRS,—In some remarks on North American Sanatoria in a recent number of THE LANCET, p. 530, I find some statements which I think do not do justice to the climate of California, and as the open air treatment of consumption is beginning to attract the attention of the profession, it is desirable that correct data should be available as regards the climatic advantages of different sanatoria. In an article on the "Climate of California in relation to Disease," published in the *Pacific Medical Journal*, March, 1879, after giving the figures showing the meteorological data relating to our mountain climate, I observe, "Now these figures convey very little information except to those who are very familiar with meteorological observations. In order to demonstrate the character of our climate to the general members of the profession it will be well to compare it with that of other elevated localities which are recommended as favourable resorts for the treatment of phthisis." I then compared in a tabular form the various meteorological data of our Californian climate with those of the climate of South Africa, the figures for the African climate being taken from an article in the *Practitioner* of October, 1878, on the "Climatic Treatment of Pulmonary and other Diseases." After presenting the data in a tabular form I observe: "As these African observations were made in the southern hemisphere I have compared the months which correspond with each other as to season—for instance, January with July. As regards equability of temperature the advantage is greatly in favour of California, particularly in the winter months. In January the greatest range here (California) was 30°, at Kimberley 44·5°, at Williamstown 43°. In February: California 26°, Kimberley 62°, Williamstown 54°. In only one month in the year was there a greater range of temperature here than at the African stations, and then the range at these stations was only two degrees less. As regards another important element—humidity—our climate greatly surpasses that of South Africa. Taking the mean humidity of the year, the relation as regards relative humidity is: California 56·4 per cent.; Kimberley 69·6 per cent.; Williamstown 79·3 per cent. If, again, we compare the relative humidity of the three stations during the six summer months, we shall find a still greater difference between the relative humidity in the two countries. In our coast range the average relative humidity from May to October was 44·3 per cent.; at Kimberley 68·8 per cent.; and at Williamstown 81 per cent. When we consider how debilitating is the effect of a moist atmosphere when combined with a high temperature, it seems surprising that such stations should have been selected for their climatic advantages in the treatment of consumption, more particularly when such a climate as we possess can be far more easily reached. Besides this, the heaviest rains come in the warmer months: nine rainy days in July, fifteen in August, and thirteen in September, would render camp-life decidedly unpleasant. In our dry rainless summers we possess a great advantage in this respect, an advantage only to be appreciated by those who have experienced the revivifying influence of camp-life. I can give no reason why it should be so, but am convinced by my own personal experience and by what I have seen in my patients, that arsenic, phosphorus, strychnine, and all the nerve tonics combined, will not half so quickly renovate a broken-down nerve apparatus as camping out in the mountains; and I believe it is by its effect primarily on the nervous system, that all other organic processes are improved, the psychological amongst the rest. ..... The figures that have been furnished by my observations (at an elevation of 2200 feet) do not indicate the best climate for consumptive patients during the latter months. At higher elevations in the northern part of Lake Co, and in the adjoining portions of Mendocino county the climate in July and August is more bracing and invigorating. I have records of temperature that have been kept by some of my patients at these higher stations which indicate a climate as near perfection as we can hope to find on this side of paradise. A maximum temperature of 78° in July and 82° in August, the lowest temperature being 56° with a mean daily range of 17°, and this amongst pine forests at an elevation of 4500 feet, offer climatic conditions which I think it would be impossible to improve." In a work I am about to publish on the open-air treatment of phthisis, the meteorological data as regards the climate of California will be given in detail. The dust storms to which you allude are only known in the hot southern valleys, a place where no consumptive patient should reside during the summer months, and as for the drought a six months' rainless summer is the normal climate of California and does not prevent its being one of the greatest wheat, fruit, and wine producing countries in the world.

I am, Sirs, yours faithfully,

Paris, March 30th, 1888. JAMES BLAKE, M.D. LOND., F.R.C.S.

MIDWIVES' MIDWIFERY.

To the Editors of THE LANCET.

SIRS,—Notes of the following interesting but unfortunate case may, perhaps, help to awaken us to action for the purpose of endeavouring to save our parturient women from the dangers to which they so willingly expose themselves in having improper aid, and to which the State seems to give a silent consent.

On the 3rd inst., about 11.30 P.M., I was called to a married woman, aged twenty-seven, in her confinement. Being at home, there was no time lost in reaching her. On entering the bedroom, I noticed her throw her arm over her head as she lay on the bed. On examination, the arms and legs were perfectly cold and pulseless, but the motion of the heart could just be detected. At the side of the bed the floor had been recently wiped, the clothes and bed being saturated with blood. The womb, *completely* inverted, with the placenta partly attached, lay on the bed. After obtaining hot water to warm my hand, reduction of the uterus (the placenta being first separated) was with some little difficulty effected. There was no hæmorrhage while I was in the room, the uterine surface being quite bloodless. Almost immediately after reduction was completed, and before the transfusion apparatus could be prepared, she ceased to breathe.

This patient had put her children to bed at 7.30, when she was apparently well; at 9 o'clock her husband found her on her knees beside the bed, with the child born. He at once sent for a neighbour, and then fetched the midwife, who, on arrival or shortly after, through the lack of any but that intuitive knowledge which all old women in the country are credited with, found herself helpless, and wisely sent for me.

In the face of such calamities as this, is it not high time that only those who have some slight training in the emergencies of midwifery should be allowed to practise as midwives? It seems that under existing laws people's jaws are to be more carefully protected from ignorant intruders than the parturient organs of those upon whose existence the happiness and comfort of so many little ones depend.

I am, Sirs, yours faithfully,

St. George's, April 8th, 1888. JUSTIN M'CALLUM M'CARTHY.

CASE OF ENTERIC FEVER(?)

To the Editors of THE LANCET.

SIRS,—I should like to have the opinion of some of your readers on the following case, which I diagnosed as enteric fever.

W. S——, miner, aged 22, slight figure, about 5ft. 10in. in height, was admitted into Maytown Hospital on Jan. 21st, 1888, having suffered for about nine days previously from febrile symptoms and the last few days from diarrhœa. On the morning of admission the temperature was 101°, pulse 98, strong and hard, pupils small, tongue covered with a white coating; no eruption. Ordered Dover's with carb. bismuth. Diet, milk and beef tea. That evening temperature ran up to 105°; pulse 100; pupils small; a good deal of restlessness. Three stools passed during the day, watery and yellow; slight epistaxis; saliva constantly being ejected, which patient says he cannot help. Jan. 22nd: Temperature 104°; pulse 98; seems easier; tongue red at tip; perspires freely; has taken his food well. Evening: Temperature 105°; pulse 130; mind wandering; two yellow watery stools. Ordered acid. sulph. aromat. and tinc. opii. Talks incoherently. 11 P.M.: Patient quite delirious, has tried several times to get out of the ward, once nearly leaped out of window; man obliged to watch him. Ordered chloral draught, but could not get it or any other thing taken; patient refuses everything. Cold applications to head, body bathed with water. Jan. 23rd: Raving all night; temperature 106°; pulse 110; profuse perspiration. Wardsman administered morphia draught early this morning; no effect. No food taken since yesterday, and bowels not open for twelve hours. No urine passed this morning, patient very delirious, and quite unconscious, with prostration. Ordered four ounces of wine, which was not taken. At 10 A.M. the temperature was rising; at 11 A.M. it was 110°; pupils greatly dilated, with cold extremities. From this time the patient gradually sank, and died at 11.50 A.M. No necropsy.

I am, Sirs, yours truly,

E. ST. GEORGE QUEKLY, Medical Officer.

Maytown Hospital, Palmer, North Queensland.

THE MARSHALL AND SHAW FUND.

To the Editors of THE LANCET.

SIRS,—Will you kindly insert the following additional list of subscriptions to the fund for Drs. Marshall and Shaw (Clifton Lunacy case). Believe me, Sirs, yours truly,

J. MICHELL CLARKE, Hon. Sec.

2, York-buildings, Clifton, Bristol, April 10th, 1888.

Amount acknowledged...	£89	11	0	Gill, John, M.D.... ...	£2	2	0
Alford, G. B.	1	1	0	Glosg, G. A.	1	1	0
Barclay, W. M.	1	1	0	Hailes, J. Clements, M.B.	1	1	0
Bartrum, J. S., J.P. ...	5	0	0	Holman, C., M.D. ...	2	2	0
Beddoe, J., M.D., F.R.S.	2	2	0	Matthews, C. E.	1	1	0
Belfield, C. W., M.D. ...	1	1	0	Morgan, W. W., M.D. ...	5	0	0
Blagg, A. F.	1	1	0	Newnham, W. H., M.B.	1	1	0
Brough, Mrs. Lionel (per J. Michell Clarke, M.B.)	0	10	6	Parry, J. H.	1	1	0
Brush, J. R., M.D. ...	1	1	0	Parson, T. Cooke	5	5	0
Coker, T. V.	1	1	0	Prichard, Augustin, M.D.	5	5	0
Dowson, C. H.	5	5	0	Rossiter, G. F., M.B. ...	2	2	0
Dunbar, Eliza Walker, M.D.	1	1	0	Smith, G. Munro	1	1	0
Elliott, C., M.D.	1	1	0	Smith, J. Greig, M.B. ...	5	5	0
Fox, Bonville B., M.D....	10	10	0	Taylor, James	1	1	0
Fox, Charles H., M.D. ...				Weatherly, Lionel A., M.D.	3	3	0
				Williams, P. Watson, M.B.	1	1	0

Mr. James Turton.—We fully sympathise with our correspondent's desire for the appointment of an officer specially qualified to perform his duties; but we would point out that if the motion of which he has sent us a copy were carried, he would exclude some of the ablest public health administrators in the country, who have already shown their competency by the work they have performed. Our correspondent suggests as an alternative "previous tenure of a similar office for an appreciable length of time—say, two or three years." This, we think, should have formed part of his motion.

J. F. C.—For the information desired we must refer our correspondent to our Students' Number, published in September last.

Dr. James Oliver.—Yes, very soon.

"HARD TIMES IN THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—In my humble opinion the "sixpenny doctor" is a really good sort, and is doing a perfectly legitimate practice—a labourer well worthy of his hire, for these few simple reasons:—(1) When you have the staff of an infirmary giving freely its advice and medicines for threepence per head; (2) when you know an M.D. who took from old practitioners a friendly society (paying from time immemorial 2*s.* 6*d*) for 1*s.* 5*d.* per head per annum (blacklegging!); (3) when you have doubly-qualified London and Edinburgh men running from a mile to three miles to attend a "bowdie," and getting 10*s.* 6*d.* (this fee to include a month's subsequent attendance); (4) when you have the above and graduates attending families, large and small, rich and poor, for one halfpenny per visit and mixture per diem (for this is the club system correctly put), i.e., threepence per family per week, with the Sunday thrown in *free*—when, I say, these things exist, one is inclined to ask, Who are the most "nasty?" I should like to know how many busy practitioners there are, slaving night and day for £500 a year and getting barely half of it, who would only be too glad to have a dispensary. Friends, commence with your M.D.'s before you come down to the poor, honest, and much maligned L.S.A. I am, Sirs, yours faithfully,

April 9th, 1888. CALOMEL.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Gowers, London; Dr. Pavy, London; Mr. Haslam, Birmingham; Mr. Jabez Hogg, London; Dr. Worthington, Colorado; Dr. Bronner, Leeds; Mr. Clutton, London; Mr. G. Q. Roberts, London; Messrs. Alliden and Johnston, Southampton; Dr. Dupré, London; Messrs. Pratt and Co., London; Mr. R. W. Cecly, Cambridge; Messrs. Burroughs and Wellcome, London; Dr. Barrs, Leeds; Mrs. L. Devey; Dr. Donald Macalister, Cambridge; Mr. Harvey, St. Leonards; Messrs. Walters and Co., London; Dr. J. M. Bright, Forest Hill; Mr. H. Greenway Plymouth; Dr. Glüser, Hamburg; Mr. H. J. Collins; Mr. Hurry Fenwick, London; Dr. H. Thomson, Glasgow; Mr. McKinney, Nunhead; Dr. E. Seaton, London; Dr. Chalmers, London; Mr. Lawson Tait, Birmingham; Dr. Goodridge, Bath; Mr. G. King; Mr. Mayo Collier, London; Dr. Phillips, Southend; Mr. S. Osborn; Mr. Justin M'Carthy, Wellington; Mr. Cropley, Rotherham; Messrs. Down Bros., London; Dr. J. H. Hill, London; Mr. Blair, Leeds; Mr. Rose Bradford, London; Dr. Clippingdale, London; Mr. Ripley, Southport; Dr. Edge, Manchester; Mr. Lewis, Birmingham; Dr. Bedford Fenwick, London; Mr. Niven, Oldham; Mr. Evans, London Mr. De Berdt Hovell, London; Mr. Munday, London; Mr. Ralph Staffs.; Mr. Churton, Leeds; Mr. Addison, Glasgow; Dr. Coghill, Birmingham; Mr. Diggens, Lancaster; Mr. Bennett, Liverpool; Dr Martyn Read, London; Mr. Boake; Dr. Thomson, Norwich; Messrs. Pope and Son, Brighton; Mr. Browning, Sheffield; Mr. Bell, Hong Kong; Mr. Frost, London; Dr. Fyfe; Mr. Thambert, U.S.A.; Mr. Jeremiah MacCarthy, London; C. D. X., London; Sapo, London; The Bradford Infirmary; R. H., London; M.D., St. Leonards; An Unprejudiced Observer; Matron, Dorset; T., Oldham; W.; The Secretary, Queen's Hospital, Birmingham; Calomel; F., Leeds.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Good, Tenbury; Mr. Baron, Ancoats; Mrs. Laskey, Bristol; Messrs. Blake and Co., Leeds; Mr. Fuge, Taunton; Mr. Barff; Messrs. Stent and Sons, Guildford; Mr. Chippinfield, Banbury; Messrs. Cowan and Co., Perth; Mr. Speake, Eastbourne; Mr. Brown, Leeds; Mr. White, Bradford; Dr. Elliott, Hull; Mr. Bolton, Surrey; Mr. Humphrey, Welshpool; Mr. Thornton, Canterbury; Mr. Thompson, Brailes; Mr. Endacott, Hove; Dr. Churchouse, Rugby; Mr. Pentland, Edinburgh; Miss Davys, Somerset; Mr. Nicholls, Suffolk; Messrs. Parke and Mitchell, Bury; Mr. Wright, Manchester; Mr. Thomas, South Wales; Mr. Williard, Wolverhampton; Dr. Gilbert, Kent; Dr. Bond, Newbury; Mr. Price, London; Mr. Parker, London; Mr. Heywood, Manchester; X. Alpha, London; N. L. L.; Prescriptio, Ruabon; Humerus, London; Pronoia, London; Beta, London; The Stafford Union; H. N. B., London; R. F. S., Colchester; The Matron, Salop Infirmary; M. X., London; X. Y., London; Beta G.; The Taunton and Somerset Hospital; A. C., London; Hilda; Medicus, Shepton Mallet; Medical, Leeds; Medicus, London; H. G., London; E. E., Surbiton; Kaiser, London; Dentist, London; M.A., Cambs.; The Matron, Southport; L. M. S., London; C. H., Cranleigh; The Pewsey Union; Medicus, Waterloo; Horton Infirmary, Banbury; X., Stoke Newington.

Hertfordshire Mercury, Herald and Weekly Free Press, Windsor and Eton Gazette, Surrey Advertiser, Birmingham Daily Post, Windsor and Eton Express, Lincolnshire Chronicle, Eastbourne Chronicle, Advocate of India, West Herts Post, &c., have been received.

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